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ABSTRACT

The Service Outcome Measurement Form (SOM) was the result of Service Outcome Measurement Project, and was developed and tested with the cooperation of Rehabilitation Administrators and Counselors in the state agencies of 11 states. The Project was designed to develop a method of measuring the relative difficulty of cases and to measure client change. This set of three documents summarizes the development and testing of the SOM--the development of the form, the reliability study, factor analytic study, case difficulty study, and client change study. (Author/PC)

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Service Outcome Measurement Form (Factored Version)

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Pretest-Posttest Instrumentation and Practice Exercises

Department of
Institutions,
Social and
Rehabilitative
Services

CG 009 945

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SERVICE OUTCOME MEASUREMENT FORM
(Factored Version)

Pretest-Posttest Instrumentation
and Practice Exercises

W. J. Westerheide Lowell Lenhart

DEPARTMENT OF INSTITUTIONS, SOCIAL AND REHABILITATIVE SERVICES

OKLAHOMA CITY, OKLAHOMA

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PREFACE

The Service Outcome Measurement Form is the result of Services Outcome Measurement Project (EV-3-73), and was developed and tested with the cooperation of Rehabilitation Administrators and Counselors in the State Agencies of Oklahoma, Maryland, Michigan, Tennessee, Utah, Texas Commission for the Blind, New Mexico, Colorado, Texas Rehabilitation Commission, Arkansas, Oregon, and Delaware.

The description of the original study and field test are available from the Department of Institutions, Social and Rehabilitative Services, P. O. Box 25352, Oklahoma City, Oklahoma 73125, under the following titles:

1) Case difficulty and client change: A review of the literature. Westerheide, W. J., and Lenhart, L., (monograph I), 1974

2) Field test of a service outcome measurement form: case difficulty Westerheide, W. J., Lenhart, L., and Miller, M. Clinton III, (monograph II), 1974

3) Field test of a service outcome measurement form: client change. Westerheide, W. J., Lenhart, L. and Miller, M. Clinton III, (monograph III), 1975

The form utilized here is referred to as the factored version in these monographs. A few minor alterations have been made to some of the scales to improve clarity of interpretations, otherwise the scales are as tested. The changes are as follows:

Factor 1, scale D. the word "own" was added to the level definitions

Factor 2, scale A. the words "blind cane" were added to the level 3 definition

Factor 5, scale A. the word "current" was added to the item title

Factor 5, scale C. the words "Totally deaf or blind (reads braille)" were added to level three

INTRODUCTION

In recent years, rehabilitation agencies have experienced a rapid expansion in the number of clients served, types of disabilities served, and kinds of services provided. This expansion has demanded the development of outcome measures that more adequately reflect the work and goals of rehabilitation agencies. The Service Outcome Measurement Form was developed to meet this growing need. Subsequent experience with the form has indicated that certain items could be deleted from the form without a substantial effect on the validity of the information provided by the form.

The Service Outcome Measurement Form (SOM Form) in this shortened version is a result of the factor analytic study performed on 1,945 SOM Forms collected as pretest data for the field test of the SOM Form (Westerheide, Lenhart, and Miller, 1974). This version of the SOM Form contains seventeen five-point rating scales with anchoring definitions at each of the levels within the individual scales. The seventeen scales are grouped into five factors. These factors and the scales are given below:

Factor 1 - Economic/Vocational Status

A. Weekly Earnings
B. Work Status
C. Primary Source of Support
D. Dependency of Client on Others for Financial Support

Factor 2 - Physical Functioning

A. Mobility
B. Physical Independence for Tasks Other Than Mobility
C. Work Tolerance
D. Prominence of Vocationally Handicapping Condition

Factor 3 - Psycho/Social Functioning

A. Identification with Worker Role
B. Compatibility of Employment Expectations with Client's Personality and Physical Condition
C. Client's Confidence as a Worker
D. Decision-Making Ability

Factor 4 - Family Relationships

A. Role in Family
B. Family Support

Factor 5 - Education

A. Current Vocational Level
B. Years of Academic Education
C. Language Facility

The score for each factor is the average for the scales in the factor and the Total Score is the sum of the scores for the factors

GENERAL INSTRUCTIONS FOR RATERS

The purpose of the Service Outcome Measurement Form is to document the type of severity of the client's problems and show the changes in the client's level of functioning that have occurred during the rehabilitation process. Items from the R-300 have been used whenever possible to facilitate filling out the form. However, the bulk of the form is counselor ratings of the level of client functioning in various areas.

All scales are five-point ratings with anchoring definitions. The definitions given must be viewed as levels of functioning in relation to employment. The definitions are designed to eliminate as much as possible the problems encountered in the good, fair, poor type of ratings.

A second consideration to be kept in mind is that the client's employability is the attribute being rated. This orientation may seem vague in some of the psychological and social scales, however, it should be remembered that minimum levels of functioning in areas such as family relationships and decision-making must be maintained or personal affairs become employment problems. Also, it is important to remember that the client's present level of functioning is rated.

Each scale is listed in the next section with a paragraph on the nature of the scale and what it is trying to measure. The rater should first carefully read the definitions of each level, then the paragraph below. Then, he should reread the level definitions in reference to the explanatory paragraph. It is imperative for the reliability of ratings that different raters and users be working within the same framework. By carefully going through this Manual, many of the problems inherent in rating scales can be eliminated before they begin.

The Practice Exercises are designed to help the rater check his understanding of the scales. The scales and the explanatory paragraph should be read carefully before you attempt to complete the Practice Exercises.

Note on Scoring

The scoring of the SOM Form is quite simple. The score for the individual factor is the average score for the scales in the factor. For example, the factor one score would be scales IA.+IB.+IC.+ID. divided by four while the factor five score would be scales VA.+VB.+VC. divided by three. The total score is the sum of the five factor scores.

Change scores for the factors and total score can be derived by subtracting the posttest scores from the pretest scores. These raw change scores were used in the analysis of the field test (Westerheide, Lenhart, and Miller, 1975). The raw scores were used in this study in order that the information provided by the study would be consistent with how the form would be used in the everyday rehabilitation setting, where data processing capabilities may be limited. There exists several statistical manipulations that can be applied to different scores that may be desirable in special studies, but they require substantial data processing support. If these manipulations are employed, subsequent reports should indicate that the resulting change scores are different from the scores used in the original validation of the instrument.

SERVICE OUTCOME MEASUREMENT FORM
(Factored Version)

Counselor:_________________Client:_____________Date:__________

1._____Status
2._____Reason for Closure (only if other than 26)

Factor 1 - Economic/Vocational Status

A. Weekly Earnings

_____1. $100.01 per week and above
_____2. $ 70.00 per week to $100.00
_____3. $ 50.01 per week to $70.00
_____4. $ 10.01 per week to $50.00
_____5. $ 10.00 per week and below

B. Work Status

_____1. Wage or salaried worker (competitive labor market) or self-employed (except BEP)
_____2. Wage or salaried worker (sheltered workshop), state agency managed business enterprise (BEP)
_____3. Homemaker, unpaid family worker, not working student
_____4. Trainee or worker (non-competitive labor market)
_____5. Not working other

C. Primary Source of Support

_____1. Own Earnings
_____2. Dividends, Interest, Rent, and Savings
_____3. Family and friends, or non-disability insurance (Retirement, Survivors, Annuity, Etc.)
_____4. Disability and Sickness Insurance (SSDI, Workmen's Compensation, Civil Service, Etc.)
_____5. Public Assistance, Private Relief, or Resident of Public Institution

D. Dependency of Client on Others for Financial Support

______1. Completely Independent
______2. Approximately 25% of income comes from sources other than own earnings
______3. Approximately 50% of income comes from sources other than own earnings
______4. Approximately 75% of income comes from sources other than own earnings
______5. Totally dependent on sources other than own earnings

Factor 2 - Physical Functioning

A. Mobility

______1. Totally Independent
______2. Ambulatory, but somewhat restricted or with minimal use of devices
______3. Ambulatory with major devices, as unassisted wheelchair, or blind (cane)
______4. Ambulatory only with assistance of another person, as assisted wheelchair
______5. Completely homebound

B. Physical Independence for Tasks Other than Mobility

______1. Totally Independent
______2. Minimal assistance required
______3. Dependent for one major or several minor tasks
______4. Dependent for several major tasks
______5. Constant need for attendant services

C. Work Tolerance

______1. Minimal restrictions to type of work client can do
______2. Occupations limited to light physical activity but able to work full-time
______3. Sedentary work, low stress, or close supervision required; but able to work full-time
______4. Unable to work full-time because of mental or physical condition
______5. Current disability status precludes employment

D. Prominence of Vocationally Handicapping Condition (Including Mental and Emotional)

_____1. Hidden and cannot be directly observed
_____2. Hidden and would only be observed episodically
_____3. Noticeable only after a period of interviewing, or only slightly noticeable
_____4. Marked and obvious, noticeable at once and continually manifest
_____5. Marked, obvious, and continually manifest and will be repugnant to most employers

Factor 3 - Psycho/Social Functioning

A. Identification with Worker Role

_____1. Client feels personal need to be independent, and do his share
_____2. Identity to worker role developing or deteriorated somewhat since disability but wants to work
_____3. Weak identity to worker role, little idea of day-to-day work demands
_____4. Client has adjusted to being dependent; talks of working but is unconvincing
_____5. Client strongly identifies with handicap and clings to dependent role

B. Compatibility of Employment Expectations with Client's Personality and Physical Condition

_____1. Client seems ideally suited for the work he desires
_____2. Client's employment expectations are reasonable, although not ideal
_____3. Client has no ideas concerning possible vocational goals, or his ideas are more "day dreams" than employment expectations
_____4. Client's employment expectations are very unrealistic and impractical
_____5. Client's employment expectations are so totally unrealistic and impractical, counselor must work with other professional persons, agencies, or institutions before client can proceed in the rehabilitation process

C. Client's Confidence in Himself as a Worker

_____1. Highly favorable, client's self-confidence inspires confidence from others
_____2. Client believes he can and will be a good employee in spite of his handicap
_____3. Client feels he will become a fairly good employee but exhibits little initiative
_____4. Client excessively timid or shows unimpressive over-confidence
_____5. Client can never see himself as being able to hold a job

D. Decision-Making Ability

_____1. Takes strong active role in decision making
_____2. Slow to make decisions but makes his own decisions
_____3. Wants others to make decisions but will take some part in decision-making process
_____4. Others make decisions for him and manage his personal affairs
_____5. Will neither help make decisions nor take action on help from others; counselor must work with other professional agencies, persons, or institutions before client can proceed in the rehabilitation process

Factor 4 - Family Relationships

A. Role in Family

_____1. Assumes appropriate role
_____2. Assumes appropriate role but some counselor reservation
_____3. Participates in familial affairs but evidence of underlying ambivalence toward family
_____4. Refuses to assume appropriate role
_____5. Conscious effort to disrupt family

B. Family Support

_____1. Good; family shows great deal of understanding of client; very supportive and helpful
_____2. Moderate; although not ideal, support is adequate
_____3. Fair; support given but is inappropriate; evidence of underlying ambivalence on the part of the family
_____4. Poor; support given but there is definite indifference on the part of the family toward client or his rehabilitation
_____5. Very poor; family definitely non-supportive, strong opposition

Factor 5 - Education

A. Current Vocational Level

______1. Professional, Technical and Managerial
______2. Licensed or certified trades and crafts, or other highly skilled work
______3. Semi-skilled and clerical
______4. Unskilled
______5. Disability status precludes employment

B. Years of Academic Education

______1. 16 years or above
______2. 13-15 years
______3. High School Graduate or G.E.D. certificate
______4. 8 years or above
______5. less than 8 years

C. Language Facility

______1. Reads and writes well; has no trouble understanding and communicating common vernacular and could learn to use technical language
______2. Reads, speaks, and writes adequately; has no particular problem filling out employment applications, or holding job interview
______3. Reads, speaks, and writes adequately for job applications and interview, but speaks slowly and may have some difficulty with other than simple written instructions. Totally deaf or blind (reads braille)
______4. Reads, speaks, and/or writes poorly, and will have difficulty interpreting even simple written instructions
______5. Almost complete lack of language, functionally illiterate, extremely small vocabulary

EXPLANATION OF SCALES

FACTOR 1 - ECONOMIC/VOCATIONAL STATUS

A. Weekly Earnings

_____1. $100.01 per week and above
_____2. $ 70.01 per week to $100.00
_____3. $ 50.01 per week to $70.00
_____4. $ 10.01 per week to $50.00
_____5. $ 10.00 per week and below

In this scale, simply check the appropriate range for the client's weekly earnings

B. Work Status

_____1. Wage or salaried worker (competitive labor market) or self-employed (except BEP)
_____2. Wage or salaried worker (sheltered workshop), state agency managed business enterprise (BEP)
_____3. Homemaker, unpaid family worker, not working student
_____4. Trainee or worker (non-competitive labor market)
_____5. Not working other

The levels in this scale correspond with the R-300 codes. Level 1 is composed of codes 1 and 3; Level 2 being codes 2 and 4; Level 3 being codes 5, 6, and 7; Level 4 being code 9, and Level 5 being code 8. If a client is "not working student" (Level 3) but is living off summer earnings and/or part-time work, he can be rated at Level 1 only if his own earnings are his primary source of support.

C. Primary Source of Support

_____1. Own Earnings
_____2. Dividends, Interest, Rent, and Savings
_____3. Family and friends, or non-disability insurance (retirement, survivors, annuity, etc.)
_____4. Disability and Sickness Insurance (SSDI, Workmen's Compensation, Civil Service, etc.)
_____5. Public Assistance, Private Relief, or Resident of Public Institution

Primary Source of Support refers to largest single source of income regardless of the amount it contributes to his total income. Level 1 and Level 2 are self-explanatory. Level 3 includes not only family and friends, but also non-disability related insurance; that is, the reason the client is receiving benefits has nothing to do with his disability. Level 4 is disability or sickness insurance of all types, while level 5 relates to those clients who are dependent on public or private relief agencies or residents of public institutions.

D. Dependency of Client on Others for Financial Support

_____1. Completely Independent
_____2. Approximately 25% of income comes from sources other than own earnings
_____3. Approximately 50% of income comes from sources other than own earnings
_____4. Approximately 75% of income comes from sources other than own earnings
_____5. Totally dependent on sources other than own earnings

This item seeks a finer measure of the client's financial independence than can be inferred from "Weekly Earnings" alone. Financial independence refers to the client's ability to provide for himself without relying on others. If a client receives money from an outside source such as a relative, dividends, etc., but the client could live on his own earnings, he would be classified as "Completely independent." If the client must rely on nonmonetary support such as free child care or medicine, he would be classified in the appropriate category relative to the approximate amount these services would cost the client if he could afford to pay for them himself. Homemakers and unpaid family workers at closure will be rated as completely dependent, if unpaid.

FACTOR 2 - PHYSICAL FUNCTIONING

A. Mobility

_____1. Totally independent
_____2. Ambulatory, but somewhat restricted or with minimal use of devices
_____3. Ambulatory with major devices, as unassisted wheelchair, or blind (cane)
_____4. Ambulatory only with assistance of another person, as assisted wheelchair
_____5. Bedridden

Ambulatory has to do with the person's ability to move about in a limited area such as a shop, office building, school, or hospital. "Totally Independent" would be checked for a person who moves about with normal speed and agility for a person of his age. "Ambulatory, but somewhat restricted or with minimal use of devices" would be a client who walks slowly, uses a brace, cane (not blind), limps, or an appliance that does not have the bulk of a wheelchair or walker. "Ambulatory with major devices, as unassisted wheelchair" refers to larger devices, blind (cane) or several smaller devices (as double leg braces and crutches), but retains the aspect of independence from help from other people, which distinguishes level four "Ambulatory only with assistance of another person." "Bedridden" refers to a client who for all practical purposes is confined to bed, or homebound to the extent that he cannot physically leave his home, hospital, or nursing home. This level does not include persons institutionalized for behavioral reasons.

B. Physical Independence for Tasks Other than Mobility

_____1. Totally independent
_____2. Minimal assistance required
_____3. Dependent for one major or several minor tasks
_____4. Dependent for several major tasks
_____5. Constant need for attendant services

Physical Independence in this category is exclusive of the area covered by the item of "Mobility." This item covers activities of daily living, self-care activities, writing, reading, and other basic skills. To rate this item, the rater should rate the problem in terms of minor being a small inconvenience, and major tasks being a significant periodical inconvenience to the employer or coworkers.

C. Work Tolerance

_____1. Minimal restrictions to type of work client can do
_____2. Occupations limited to light physical activity but able to work full-time
_____3. Sedentary work, low stress, or close supervision required; but able to work full-time
_____4. Unable to work full-time because of mental or physical condition
_____5. Current disability status precludes employment

Work Tolerance refers to limitations as to the types of work a client can do and the time the client can stay on the job. The first three levels refer to limitations as to the type of work the client can do. If the client can do only sedentary work, increasing severity is reflected in the time a client can stay working. In reference to mental disabilities, a client who could work a regular full-time job but requires low stress, close supervision, or other special job conditions, would be rated at level 3, "Sedentary work, low stress, or requires close supervision, but able to work full-time."

D. Prominence of Vocationally Handicapping Condition (Including Mental and Emotional) Handicap Is:

_____1. Hidden and cannot be directly observed
_____2. Hidden and would only be observed episodically
_____3. Noticeable only after a period of interviewing, or only slightly noticeable
_____4. Marked and obvious, noticeable at once and continually manifest
_____5. Marked, obvious, and continually manifest and will be repugnant to most employers

How obvious the handicap is should be rated as it might be noticed by a potential employer. The last definition might be considered as handicaps that would preclude saleswork or occupations involving a much public contact.

FACTOR 3 - PSYCHO/SOCIAL FUNCTIONING

A. Identification with Worker Role

_____1. Client feels personal need to be independent, and do his share
_____2. Identity to worker role developing deteriorated somewhat since disability but wants to work
_____3. Weak identity to worker role, little idea of day-to-day work demands
_____4. Client has adjusted to being dependent; talks of working but is unconvincing
_____5. Client strongly identifies with handicap and clings to dependent role

The client's attitude toward dependency and the worker role is rated from a personal need to be independent to a total life style and personal orientation built around the dependency caused or excused by the disability. The second level differentiates clients who are in the process of solidifying their identity to the worker role and clients who formerly had a strong worker identity which has weakened somewhat since the onset of the disability; however, the clients at the third level have developed at best only a weak identity as a worker and is differentiated from level 2 by either the absence of the development of a positive work identity or the absence of a basic worker identity. Clients at level 4 have adjusted to being dependent and may talk about working; however, this seems only for the benefit of the counselor and is unconvincing. Level 5 is distinguished by the intensity and more total involvement of the client with the dependency role.

B. Compatibility of Employment Expectations with Client's Personality and Physical Condition

_____1. Client seems ideally suited for the work he desires
_____2. Client's employment expectations are reasonable, although not ideal
_____3. Client has no ideas concerning possible vocational goals, or his ideas are more "day dreams" than employment expectations
_____4. Client's employment expectations are very unrealistic and impractical
_____5. Client's employment expectations are so totally unrealistic and impractical, counselor must work with other professional persons, agencies, or institutions before client can proceed in the rehabilitation process

Compatibility of employment expectations with personality and physical condition covers not only the area of realistic understanding of the physical limitations of the disability, but also the understanding of personality strong and weak points in relation to employment. The first level refers to individuals who have realistic concepts of their strengths, limitations and themselves, as differentiated from clients having a reasonable vocational goal, but not as well integrated with aptitudes, abilities, and interests. Also, the second level would cover a vocational goal which seems reasonable to the counselor; however, he has some reservations. The third level pertains to clients having no firm ideas as to what they should do or clients who state unrealistic employment expectations which the client gives when questioned closely. The fourth level deals with the client who not only has unrealistic and impractical goals, but also believes they are realistic resulting in a significant barrier to the client's rehabilitation. A client should not be placed accordingly in the last level unless his unrealistic outlook is symptomatic or a larger loss of contact with reality. In this case, the counselor will be acquiring short-term therapy or be working simultaneously with a mental institution or mental health agency.

C. Client's Confidence in Himself as A Worker

_____1. Highly favorable, client's self-confidence inspires confidence from others
_____2. Client believes he can and will be a good employee in spite of his handicap
_____3. Client feel he will become a fairly good employee but exhibits little initiative
_____4. Client excessively timid or shows unimpressive overconfidence
_____5. Client can never see himself as being able to hold a job

This item deals with self-confidence and self-concept in terms of the client's perception of himself as a worker or ability to get a job done. The first level refers to those clients who can take initiative and inspire others to have confidence in him. The counselors often has clients who "talk a good stick" but leave the counselor with many reservations, or the counselor feels the client is trying to put something over on him. This client reaction is equivalent to excessive shyness and timidity and should be rated in level 4. Levels 2 and 3 fall in between being differentiated by the amount of initiative the client feels he can take. Level 5 refers to those clients who are self-deprecating to the extreme, and as a result of this feeling of failure, the client will probably leave any job he is placed on at the first bit of rough going and feel he has proved what he has known all along--that he is destined to be a failure.

D. Decision-Making Ability

_____1. Takes strong active role in decision making
_____2. Slow to make decisions but makes his own decisions
_____3. Wants others to make decisions but will take some part in decision making process
_____4. Others make decisions for him and manage his personal affairs
_____5. Will neither help make decisions nor take action on help from others; counselor must work with other professional agencies, persons, or institutions before client can proceed in the rehabilitation process

Decision-making ability refers not only to making decisions but implies acting on these decisions. Also implied is the ability to manage his own affairs. The first level deals with the client who meets his problems head on, makes his own decisions, and needs information and financial help rather than counseling; whereas, a client on the second level may seem overcautious, but maintains his independence. At the third level, a client looks for an easy way out of the decision-making process and maintains possibly only a veto power in this process. At the fourth level, the client does not make decisions, must be led and prodded to take any action. At level five, the client's immobility in taking any action and making decisions necessitates work with an outside agency such as a mental institution, mental health clinic, or the counselor must plan for therapy from outside professional resources before the client can proceed in the rehabilitation process.

FACTOR 4 - FAMILY RELATIONSHIPS

A. Role in Family

_____1. Assumes appropriate role
_____2. Assumes appropriate role but some counselor reservation
_____3. Participates in familial affairs but evidence of underlying ambivalence towards family
_____4. Refuses to assume appropriate role
_____5. Conscious effort to disrupt family

The appropriateness of the client's role in the family can be a difficult area to rate because of variations in age, sex, race, and physical and emotional conditions of the other family members. The distinction between Level 1 and Level 2 is made basically on how the rater feels about his judgment. In these two levels, the client seems to assume the appropriate role for his particular family situation, but Level 2 represents a somewhat guarded judgment. Level 3 has the client participating in family affairs, but only at a superficial level when it seem unjustified by the family's reaction to the client, while in Level 4 not even superficial participation is present. Level 5 refers to clients actively trying to disrupt the family, and may be seen as a psychiatric problem. Remember that the appropriateness of the role the client plays is what is being rated and , in some instances, a client who is uninvolved with his family, may, because of the emotional climate at home, be rated on Level 1 or 2. Persons other than biological parents may be rated as family if they perform the family's function in relation to the client. If the client has no immediate family, rate him at Level 2.

D. Family Support

_____1. Good; family shows great deal of understanding of client; very supportive and helpful
_____2. Moderate; although not ideal, support is adequate
_____3. Fair; support given but is inappropriate; evidence of underlying ambivalence on the part of the family
_____4. Poor; support given but there is definite indifference on the part of the family toward client or his rehabilitation
_____5. Very poor; family definitely non-supportive, strong opposition

Family support is rated not only by whether support is given, but also whether it is appropriate or not. By rating the item in this manner, the rating is intended to reflect the understanding of the client by his family as well as the presence of active support. The client's family can be every bit as unrealistic about the client's disability and capacities as the client himself. At the first level, the family is very involved and shows a good understanding of the client's situation. In Level 2 the family support is still adequate, but does not show the quality in understanding of the client and/or appropriateness of the support that exists at Level 1. The third level refers to the family who wants the client to live up to their expectations, which are out of touch, either high or low, with the client's capabilities. The fourth level represents superficial support that only serves as a cover-up for underlying indifference. At Level 5 the family offers active opposition and wants to keep the client dependent on the family. If the client has no family, place him at Level 2, because he does not have the positive effect of a supportive family. Persons other than biological parents may be rated as family if they perform the family's function in relation to the client.

FACTOR 5 - EDUCATION

A. Current Vocational Level

_____1. Professional, Technical and Managerial
_____2. Licensed or certified trades and crafts, or other highly skilled work
_____3. Semi-skilled and clerical
_____4. Unskilled
_____5. Disability status precludes employment

Current Vocational Level refers to the type of job the client could or is presently holding, that is the job the client is presently capable of holding. Level 1 is professional (doctors, lawyers, educators, counselors, etc.), highly technical (engineers, architects), and managerial (managers, accountants, officials). Level 2 is skilled labor. These occupations are usually licensed or certified by federal, state or local governments or a trade association; however, exceptions to this rule of thumb must be made in certain cases such as farmers or farm workers who may fall at any level, and certain types of secretaries whose work and salary may place them in Level 2 or Level 1. Level 3 relates to semi-skilled occupations that require a minimum of training at least at entry level jobs. An apprentice would be rated at Level 3 until he receives his journeyman's license. Level 4 is unskilled labor and work which requires no formal training over two weeks or only a short on-the-job orientation period is required. At Level 5 the limitations imposed by the client's disability prevent him from maintaining employment. If the client is unemployed but could perform unskilled labor, rate him at Level 4 or the appropriate level for the job he could presently perform. Remember the client's current vocational level is being rated, not his expected level after services.

B. Years of Academic Education

_____1. 16 years or above
_____2. 13-15 years
_____3. high school graduate or GED Certificate
_____4. 8 years or above
_____5. less than 8 years

This item reflects the number of years of training the client has had in formal academic schools. If a high school diploma or GED Certificate was received, check level 3. In cases of mentally retarded, special education, or learning disabilities class, the approximate grade level attained should be checked. If a BA or BS degree has been granted in under 4 years, rate the client at Level 1.

C. Language Facility

_____1. Reads and writes well; has no trouble understanding and communicating common vernacular and could learn to use technical language

_____2. Reads, speaks, and writes adequately; has no particular problem filling out employment applications, or holding job interviews

_____3. Reads, speaks and writes adequately for job applications and interviews, but speaks slowly and may have some difficulty with other than simple written instructions. Totally deaf or blind (reads braille).

_____4. Reads, speaks and/or writes poorly, and will have difficulty interpreting even simple written instructions

_____5. Almost complete lack of language, functionally illiterate, extremely small vocabulary

This item deals with basic language skills needed on the job. The first level covers not only very fluent clients, but also any client who can express himself clearly even if client's vocabulary is not large. The second level is for clients whose use of language is adequate for job interviews, filling out applications, and making business telephone calls and following most written instructions. Clients rated in level 3 would have difficulty interpreting complex instructions and would be limited to low level office work. A client at level 4 would have a great deal of trouble filling out job applications and holding a good interview; on the job, he may have trouble following even simple written instructions. The last level refers to clients who have extremely limited verbal as well as written vocabularies.

PRACTICE EXERCISES

Below are some practice exercises designed to help the rater check his understanding of the individual scales.

A hypothetical case is listed first and then the scales to be rated according to the information given in the example. Be careful not to read anything into the example. Consider all variables not mentioned as having no effect on the case. After the rating is made, check your rating with the assigned rating. The assigned rating and the reason for the rating is given to insure that the framework in which the rater is operating is consistent with that of the authors. Refer back to the explanatory paragraph if you are still unsure of the reason an example was assigned its rating.

EXAMPLE ONE

Ruth is a 35-year old beautician who is presently employed at a local beauty shop. She makes approximately $35 per week and is paid on a commission basis. She seems to have been unable to retain a steady clientele because her dental condition tends to repulse potential customers in spite of her otherwise neat appearance and good health. Her employer reports she is a good worker, and her employment history shows she has worked steadily since graduating from beauty school at the age of 21. Her present low earnings seem to coincide with the onset of her dental problems. Because of her steadily decreasing income, she now has severe financial problems. Her present employer is thinking of letting Ruth go, but has agreed to keep her on if her dental problem is corrected. Her plan calls for corrective surgery and full dentures at a local hospital. She will then return to her present job.

Physical Functioning

A. Mobility

_____1. Totally Independent
_____2. Ambulatory, but somewhat restricted or with minimal use of devices
_____3. Ambulatory with major devices, as unassisted wheelchair, or blind (cane)
_____4. Ambulatory only with assistance of another person, as assisted wheelchair
_____5. Bedridden

Level 1 - Totally Independent - since good health is reported and no other health problems are mentioned.

B. Physical Independence for Tasks Other than Mobility

_____1. Totally independent
_____2. Minimal assistance required
_____3. Dependent for one major or several minor tasks
_____4. Dependent for several major tasks
_____5. Constant need for attendant services

Level 1 - Totally independent - since good health is reported and no other health problems are mentioned.

C. Work Tolerance

_____1. Minimal restrictions to type of work client can do
_____2. Occupations limited to light physical activity but able to work full-time
_____3. Sedentary work, low stress, or close supervision required; but able to work full-time
_____4. Unable to work full-time because of mental or physical condition
_____5. Current disability status precludes employment

Level 1 - Minimal restrictions to type of work client can do - since the work tolerance item deals with physical and mental capabilities to sustain work activity, and no side effects of the dental problem have been noted.

D. Prominence of Vocationally Handicapping Condition (Including Mental and Emotional) Handicap is:

_____1. Hidden and cannot be directly observed
_____2. Hidden and would only be observed episodically
_____3. Noticeable only after a period of interviewing, or only slightly noticeable
_____4. Marked and obvious, noticeable at once and continually manifest
_____5. Marked, obvious, and continually manifest and will be repugnant to most employers

Level 5 - Marked, obvious, and continually manifest, and will be repugnant to most employers - This is seemingly the client's only real problem and is the justification for giving services. Her low earnings and her present employer's comments confirm this problem. At closure, if her dental work is successful, she will be rated at level 1 - Hidden and cannot be directly observed.

The items in Social Competency and Adjustment to Disability for Ruth would be rated probably at level 1 or 2 since she is working and her employer reports she is a good worker and is willing to keep her on the job if the dental problem is corrected. Not enough information is given to make finer distinctions.

EXAMPLE TWO

Paul is a 19-year old male who wants to go into law school. His I. Q. on the WAIS was 97 and he graduated from high school with about average grades. Because of the residual effects of polio, he must use a brace to walk. When talking to the counselor about his employment expectations, he stated he wants to go to law school. After discussing his grades and test results with the counselor, he maintains that his high school grades and I. Q. score resulted from not trying and should not be held against him.

Physical Functioning

A. Mobility

______1. Totally independent
______2. Ambulatory, but somewhat restricted or with minimal use of devices
______3. Ambulatory with major devices, as unassisted wheelchair or blind (cane)
______4. Ambulatory only with assistance of another person, as assisted wheelchair
______5. Bedridden

Level 2 - Ambulatory but somewhat restricted or with minimal use of devices has been assigned. Paul is able to walk with his brace, but it would restrict activity. If a leg brace and crutches were required, he would be assigned Level 3 - Ambulatory with major devices, as unassisted wheelchair.

Psycho/Social Functioning

B. Compatibility of Employment Expectations with Client's Personality and Physical Condition

_____1. Client seem ideally suited for the work he desires
_____2. Client's employment expectations are reasonable, although not ideal
_____3. Client has no ideas concerning possible vocational goals, or his ideas are more "day dreams" than employment expectations
_____4. Client's employment expectations are very unrealistic and impractical
_____5. Client's employment expectations are so totally unrealistic and impractical, counselor must work with other professional persons, agencies, or institutions before client can proceed in the rehabilitation process

Level 4 - Client's employment expectations are very unrealistic and impractical is assigned. Both his I. Q. score and previous grades in school make the vocational goal of attorney unrealistic. His rationalization for his score and grades does not seem very well thought out. He is not placed in level 3 because he maintains that he wants to be a lawyer even after discussions with the counselor pertaining to his I. Q. score and past grades.

EXAMPLE THREE

Pete is a 20-year old man who was referred to vocational rehabilitation by the state reformatory with a disability of personality, character, and behavior disorder. This seems to be linked with the counselor's immediate impression that the client is hostile, fearful, and suspicious. Pete comes from an AFDC family of six children and has never had any kind of stable father influence. He lacks basic skills, and this, along with his past record probably explains his fearfulness when talking to the counselor. The counselor's original impression was borne out in the psychological evaluation.

Pete had a good work record while in the reformatory, marred only once by a confrontation with his workshop supervisor, whom Pete thought had been treating him unfairly. As a result, he was transferred to the shoe repair shop which was managed by an older man, whom Pete seemed to like quite well. While in the shoe repair shop, Pete became quite proficient in shoe repair and general leather work. He has looked for employment at local shoe repair shops, but has never made it past the interview stage, probably because of his fearful, suspicious attitude towards others.

After two interviews, the counselor felt the client's attitude of suspiciousness and hostility was due to his fearfulness, lack of knowledge of basic social skills, and defensiveness. Therefore, Pete's plan calls for six weeks of prevocational training and several sessions with the counselor. Pete seems very motivated to take part in this plan and has a strong desire to "make it."

Pete is presently staying at a private, local halfway house, where counseling is available. The decision to stay at the halfway house was made by Pete before he left the reformatory because of his disrupted home situation. He felt the need to escape the influence of two older brothers who had been in and out of prison. Pete's vocational goal is that of shoe repairman because although he could learn a more skilled trade, he feels confident in his ability as a shoe repairman. It is felt an extended training course might be more than the client could handle until he has adjusted to the world of work and has been regularly employed for a while.

His intelligence is average and he works well with his hands. Although the counselor's initial impression of Pete was poor in regard to his ability to communicate, this seemed to be caused by client's suspiciousness and fearfulness rather than a basic language difficulty. Pete's physical health seems very good.

Economic/Vocational Status

D. Dependence of Client on Others for Financial Support

_____1. Completely Independent
_____2. Approximately 25% of income comes from sources other than own earnings
_____3. Approximately 50% of income comes from sources other than own earnings
_____4. Approximately 75% of income comes from sources other than own earnings
_____5. Totally dependent on sources other than own earnings

Since client is unemployed, level 5 - Totally dependent on sources other than earnings - is assigned; however, if he is working at closure and still living in the halfway house, room and board must be considered before rating him at level 1 - Completely Independent

A. Mobility

_____1. Totally Independent
_____2. Ambulatory, but somewhat restricted or with minimal use of devices
_____3. Ambulatory with major devices, as unassisted wheelchair, or blind (cane)
_____4. Ambulatory only with assistance of another person, as assisted wheelchair
_____5. Bedridden

B. Physical Independence for Tasks Other than Mobility

_____1. Totally Independent
_____2. Minimal assistance required
_____3. Dependent for one major or several minor tasks
_____4. Dependent for several major tasks
_____5. Constant need for attendant services

These items are assigned level 1 - Totally independent - as the handicap to employment has no relation to the client's physical condition.

C. Work Tolerance

_____1. Minimal restrictions to type of work client can do.
_____2. Occupations limited to light physical activity but able to work full-time
_____3. Sedentary work, low stress, or close supervision required; but able to work full-time
_____4. Unable to work full-time because of mental or physical condition
_____5. Current disability status precludes employment

Level 3 - Sedentary work, low stress, or close supervision required; but able to work full-time - is assigned. The client's present fearfulness, hostility, and suspiciousness would require an extremely understanding employer, who the client could relate to in the same way as the supervisor in the reformatory shoe shop - a low stress type of job.

D. Prominence of Vocationally Handicapping Condition (Including Mental and Emotional) Handicap is:

_____1. Hidden and cannot be directly observed
_____2. Hidden and would only be observed episodically
_____3. Noticeable only after a period of interviewing, or only slightly noticeable
_____4. Marked and obvious, noticeable at once and continually manifest
_____5. Marked, obvious and continually manifest and will be repugnant to most employers

Level 4 - Marked and obvious, noticeable at once and continually manifest is assigned. The counselor's immediate impression, mentioned at the beginning of the example, is the reason for this handicap being rated at Level 4 rather than Level 3. Although the counselor may have established rapport with the client later, a prospective employer would not; and in the employment situation, the handicap would be continually manifest. At closure, the client may be rated at Level 1 or Level 2.

Psycho/Social Functioning

A. Identification with Worker Role

_____1. Client feels personal need to be independent, and do his share
_____2. Identity to worker role developing or deteriorated somewhat since disability but wants to work
_____3. Weak identity to worker role, little idea of day-to-day work demands
_____4. Client has adjusted to being dependent; talks of working but is unconvincing
_____5. Client strongly identifies with handicap and clings to dependent role

Level 2 - Identity to worker role developing or deteriorated somewhat since disability - The client is attempting to break his pattern of maladjustment, but his lack of knowledge of the world of work, as demonstrated by the need for prevocational training, would put him in Level 2 rather than Level 1.

B. Compatibility of Employment Expectations with Client's Personality and Physical Condition

_____1. Client seems ideally suited for the work he desires
_____2. Client's employment expectations are reasonable, although not ideal
_____3. Client has no ideas concerning possible vocational goals, or his ideas are more "day dreams" than employment expectations
_____4. Client's employment expectations are very unrealistic and impractical
_____5. Client's employment expectations are so totally unrealistic and impractical, counselor must work with other professional persons, agencies, or institutions before client can proceed in the rehabilitation process

Level 2 - Client's employment expectations are reasonable although not ideal - The ideal situation would have the client working toward a vocational goal in a more skilled area but considering his present situation, his decision to stay with shoe repair is quite reasonable.

C. Client's Confidence in Himself as a Worker

_____1. Highly favorable, client's self-confidence inspires confidence from others
_____2. Client believes he can and will be a good employee in spite of his handicap
_____3. Client feels he will become a fairly good employee but exhibits little initiative
_____4. Client excessively timid or shows unimpressive over-confidence
_____5. Client can never see himself as being able to hold a job

Level 2 - Client believe~~s he~~ can and will be a good employee in spite of his handicap - In the example, it states that "he feels confident in his ability as a shoe repairman" and is rated at Level 2 because shoe repairman is his vocational goal. If he was training for another job, his rating might be lower.

Family Relationships

A. Role in Family

_____1. Assumes appropriate role
_____2. Assumes appropriate role but some counselor reservation
_____3. Participates in familial affairs but evidence of underlying ambivalence toward family
_____4. Refuses to assume appropriate role
_____5. Conscious effort to disrupt family

Level 2 - Assumes appropriate role, but counselor reservation - Considering the home environment, the decision to stay at the half-way house seems to be a good one; however, personal contact with the client's family would probably be required before the rater would feel confortable to place this type of case at Level 1.

Education

A. Language Facility

_____1. Reads and writes well: has no trouble understanding and communicating common vernacular and could learn to use technical language

_____2. Reads, speaks, and writes adequately: has no particular problem filling out employment applications, or holding job interview

_____3. Reads, speaks, and writes adequately for job application and interview, but speaks slowly and may have some difficulty with other than simple written instrutions. Totally deaf or blind (reads braille)

_____4. Reads, speaks, and/or writes poorly, and will have difficulty interpreting even simple written instructions

_____5. Almost complete lack of language, functionally illiterate, extremely small vocabulary

Level 2 - Reads, speaks, and writes adequately; has no particular problem filling out employment applications or holding job interview - Client's problem is symptomatic of his disability and not his ability to use the language. This item would be easier to rate if test data were given in the example.

EXAMPLE FOUR

Sam is a 38-year old man who worked 14 years as a truck driver. Two years ago, he was involved in a serious accident, which left him paralyzed from the waist down. Sam still has good strength in his arms and handles his wheelchair quite well. He has not worked since his accident and his family's major source of income is his disability check, which is subsidized by his wife's $20 per week income from babysitting. Sam seems to want to work and has only minimally adjusted to his present situation. He has been accustomed to physical labor and cannot decide what job other than that he would like to do. Tests show about average mental ability and good manual and finger dexterity.

D. Dependency of Client on Others for Financial Support

_____1. Completely independent
_____2. Approximately 25% of income comes from sources other than own earnings
_____3. Approximately 50% of income comes from sources other than own earnings
_____4. Approximately 75% of income comes from sources other than own earnings
_____5. Totally dependent on sources other than earnings

Level 5 - Totally dependent on sources other than earnings - is assigned. This item is rated on the client's earnings rather than the family's income.

Physical Functioning

A. Mobility

_____1. Totally Independent
_____2. Ambulatory but somewhat restricted or with minimal use of devices
_____3. Ambulatory with major devices, as unassisted wheelchair
_____4. Ambulatory only with assistance of another person, as assisted wheelchair
_____5. Bedridden

Level 3 - Ambulatory with major devices, as unassisted wheelchair - is assigned since client has learned to handle his wheelchair quite well.

C. Work Tolerance

_____1. Minimal restrictions to type of work client can do
_____2. Occupations limited to light physical activity but able to work full-time
_____3. Sedentary work, low stress, or close supervision required; but able to work full-time
_____4. Unable to work full-time because of mental or physical condition
_____5. Current disability status precludes employment

Level 3 - Sedentary work, low stress , or close supervision required; but able to work full-time - because he must use a wheelchair.

D. Prominence of Vocationally Handicapping Condition (Including Mental and Emotional) Handicap is:

_____1. Hidden and cannot be directly observed
_____2. Hidden and would only be observed episodically
_____3. Noticeable only after a period of interviewing, or only slightly noticeable
_____4. Marked and obvious, noticeable at once and continually manifest
_____5. Marked, obvious, and continually manifest and will be repugnant to most employers

Level 4 - Marked and obvious, noticeable at once and continually manifest - because of wheelchair.

Psycho/Social Functioning

A. Identification with Worker Role

_____1. Client feels personal need to be independent, and do his share
_____2. Identity to worker role developing or deteriorated somewhat since disability but wants to work
_____3. Weak identity to worker role, little idea of day-to-day work demands
_____4. Client has adjusted to being dependent; talks of working but is unconvincing
_____5. Client strongly identifies with handicap and clings to dependent role

Level 2 - Identity to worker role just developing or deteriorated somewhat since disability but wants to work - In spite of the time client has not worked, his long work history indicates previous identity as a worker. The time since his disability and lack of vocational goal seems more the result of the total change in life style than the learning of a dependency role.

B. Compatibility of Employment Expectations with Client's Personality and Physical Condition

_____1. Client seems ideally suited for the work he desires
_____2. Client's employment expectations are reasonable, although not ideal
_____3. Client has no ideas concerning possible vocational goals, or his ideas are more "day dreams" than employment expectations
_____4. Client's employment expectations are very unrealistic and impractical
_____5. Client's employment expectations are so totally unrealistic and impractical, counselor must work with other professional persons, agencies, or institutions before client can proceed in the rehabilitation process

Level 3 - Client has no ideas concerning possible vocational goals, or his ideas are more "day dreams" than employment expectations - The change from physical labor to sedentary work seems to be the cause of his difficulty with choosing a vocational goal, not unrealistic expectations as in Level 4.

EXAMPLE FIVE

Joe is a 35-year old ex-construction foreman. His disability is high quadraplegia and he has only gross upper extremity movements. Presently he has plateaued and no further physical improvement is expected. He is in a conventional wheelchair and requires attendant services for all functions except feeding. Testing shows he has about average mental ability. He has spent the last four months in the hospital and his family has visited him almost every day while in the hospital. They have also sat in on his physical and occupational therapy program and show a great deal of understanding and acceptance of the client.

His plan calls for providing an electric wheelchair, CO^2 muscle, and training as a bookkeeper. A coordinated training and therapy program at a rehabilitation training center is planned. However, the center is 80 miles from the client's home and because his wife works six days a week, she will only be able to visit him on Sundays for the six months he will be in training. This disturbs the client, but he accepts the situation as he does not want to be dependent on his wife's earnings. After training, he will be at best still dependent for transfer and many activities of daily living.

Physical Functioning

B. Physical Independence for Tasks Other than Mobility

_____1. Totally independent
_____2. Minimal assistance required
_____3. Dependent for one major or several minor tasks
_____4. Dependent for several major tasks
_____5. Constant need for attendant services

Level 5 - Constant need for attendant services - at acceptance, because he is dependent for all tasks except feedings. At closure, if the plan is successful, he will be at Level 4 - Dependent for several major tasks - due to the help needed for transfer and activities of daily living.

Family Relationships

B. Family Support

_____1. Good; family shows great deal of understanding of client; very supportive and helpful
_____2. Moderate, although not ideal, support is adequate
_____3. Fair; support given but is inappropriate; evidence of underlying ambivalence on the part of the family
_____4. Poor; support given but there is definite indifference on the part of the family toward client or his rehabilitation
_____5. Very poor; family definitely non-supportive, strong opposition

Level 1 - Good; family shows a great deal of understanding of client; support very positive and appropriate - has been assigned because not only are they supportive, but they have also taken an active interest in his physical and occupational therapy programs.

EXAMPLE SIX

Jack is a 35-year old double leg amputee. His medical report shows he is in otherwise good health, but he constantly complains of many aches and pains unrelated to his disability. Further medical examinations show no justification for his complaints and his complaints vary from week to week.

Jack still lives with his parents, who seem to enjoy his dependency on them. They presently seem to make all of his decisions for him. His mother always brings Jack to the counseling sessions and wants to sit in on them. When talking to Jack without his mother present, he becomes extremely quiet and only answers simple questions in a "yes-no" manner. Although Jack's mother makes certain he keeps his appointments, the counselor feels everything Jack may accomplish is mostly cancelled out by his mother's overproctectiveness.

Psycho/Social

D. Decision-Making Ability

_____1. Takes strong active role in decision making
_____2. Slow to make decisions but makes his own decisions
_____3. Wants others to make decisions but will take some part in decision making process
_____4. Others make decisions for him and manage his personal affairs
_____5. Will neither help make decisions nor take action on help from others; counselor must work with other professional agencies, persons, or institutions before client can proceed in the rehabilitation process

Level 4 - Others make decisions for him and manage his personal affairs - is assigned due to his obvious dependency on his mother. Level 5 would not be checked unless the problem became so severe that the counselor would have to acquire short-term psychotherapy for the client-or referral to a local mental health clinic for treatment.

Family Relationships

P. Family Support

_____1. Good; family shows great deal of understanding of client; very supportive and helpful
_____2. Moderate; although not ideal, support is adequate
_____3. Fair; support given but is inappropriate; evidence of underlying ambivalence on the part of the family
_____4. Poor; support given but there is definite indifference on the part of the family toward client or his rehabilitation
_____5. Very poor; family definitely non-supportive, strong opposition

Level 4 - Poor; support given but there is definite indifference on the part of the family toward client or his rehabilitation - is assigned because support is present, but the family wants to keep the client dependent on them. The desire to keep the client dependent makes the family an active negative influence. This active negative influence is the reason the client was assigned Level 4 rather than Level 3. Level 5 is reserved for cases where the family shows strong open opposition.

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MONOGRAPH II

FIELD TEST OF A SERVICES OUTCOME MEASUREMENT FORM:

Case Difficulty

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PREFACE

Service Outcome Measurement Project is designed to develop a method of measuring the relative difficulty of cases and measure client change. This project is unique in that it is totally housed and administered by the Oklahoma's Rehabilitation Agency. This is indicative of the amount of energy not only Oklahoma but all of the participating states are willing to invest in the solution of this problem.

This monograph represents the results of the case difficulty investigation of Services Outcome Measurement Project. The Services Outcome Measurement Form is currently being tested as a measure of client change with the Study II sample by obtaining a posttest at closure or one year after pretest. The results of this study will be published in a subsequent monograph.

ACKNOWLEDGEMENTS

A project the size and scope of Services Outcome Measurement Project is dependent from the onset on many people. This is especially true of this project. The project staff is very grateful for the cooperation and support of the participating counselors and administrators in Oklahoma, Texas, New Mexico, Tennessee, Maryland, Michigan, Colorado, and Utah.

Appendix A lists the States Advisory Committee to Services Outcome Measurement Project and the State Liaison personnel. The participation and interest of these individuals has played an essential role throughout the project.

The project's consultants, M. Clinton Miller III, Ph.D., Medical University of South Carolina, Charleston; Harold Viaille, Ph.D., Social and Rehabilitation Service, Regional Office, Dallas, Texas; and Barbara Haack Chesney, Ph.D., University of Oklahoma Health Sciences Center have contributed greatly to the projects outcome.

A special thanks is due to Terri Lyday for handling and keeping track of the thousands of forms sent and received by the project, and to Pauline Schwedland for the typing of the manuscript.

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Chapter I

INTRODUCTION

Scope of the Problem

Effective program development and management requires effective measures of performance. The traditional closure system in vocational rehabilitation has become ineffective as a management and evaluation tool and has become a burden, rather than an aid, to the achievement of the goals of rehabilitation. Hawryluk (1972) describes the present system as only allowing gross distinctions between clients who are temporarily 100% successful and clients who are temporarily 100% unsuccessful. It is questionable if the closed rehabilitated system even allows these distinctions.

Ideally, the goal of rehabilitation is to help the client obtain his highest economical, vocational, personal, and social potential. Knowing the client has been on the job for 30 days distinguishes only the partly successful and partly unsuccessful. In the case of homemaker closures, even less is known.

The closure system not only yields very little information, but also inhibits the achievement of goals it so weakly reflects. As Hawryluk (1972) notes:

> The purpose of outcome criterion is to direct the energies and talents of an organization to those activities that will most further the goals of the organization. Situations can arise, however, where the satisfaction of an outcome criterion becomes an end in itself. Rehabilitation counselors are more and more openly challenging the headcounting which is being used to evaluate counselor performance. Counselors tend to see their role in a therapeutic vein but feel they are increasingly constrained to focus time and attention on meeting numeric quotas. The pressure to meet the "closed-placed" quota often conflicts with the needs of good rehabilitation practices (Hawryluk, 1972, p. 23).

Although the present closure system has been criticized by research personnel (Viaille 1968, Miller and Barillas 1967, Wallis and Bozarth 1972), Legislators (House Report #92-928) and interested citizens (NCACVR 1968), the "26" closure remains the prime basis of program evaluation in vocational rehabilitation.

The most often mentioned alternative to the present system has been a weighted case closure system with weights based on the relative case difficulty. Difficulty, however, has not been precisely defined. In general, difficulty refers to the amount of time, effort, worry, work and resources required of the counselor during the rehabilitation process. It can also include the time, effort and money expended not only by the rehabilitation counselor and agency but by other persons and agencies on behalf of the client. The question might be asked, "Difficulty for whom? the individual client? the counselor? the rehabilitation agency? or other persons and agencies attempting to aid the client in the rehabilitation process?" If the goal of difficulty determination is to evaluate the individual counselor, then the counselor's effort is the focus of concern. If the goal is evaluation of the service delivery system, all components of that system are involved. If the question is raised to the social level, difficulty determination must include not only the delivery system itself, but also the effort expended by other groups, agencies, or individuals regardless of whether the services are bought or donated. In addition an individual client can vary considerably in terms of "difficulty" depending on whether his vocational goal was competitive employment, sheltered employment, homemaker, or unpaid family worker, not to mention a host of other factors which might contribute to difficulty. As long as case difficulty is tied to the "26" closure system, it may do little to relieve the present evaluation problems that are hampering good rehabilitation practice.

It may prove useful to become divorced from the concepts of closure and difficulty altogether and re-examine the requirements for a contemporary method of program evaluation. As a starting point, it is necessary to differentiate evaluating the effectiveness of a program from evaluating the efficiency of a program. These are essentially two different questions. Effectiveness of services involve the changes in the client's functioning in reference to the goals of rehabilitation as a result of rehabilitation services. Efficiency refers to the economic use of resources to produce these changes. It is, therefore, quite possible for a program to be very effective, while at the same time be inefficient. However, a program cannot be efficient unless it is effective. To adequately evaluate a program it is necessary to first establish adequate measures of its effectiveness; only then, can efficiency of the program be measured.

Evaluating the Effectiveness of Rehabilitation Services

In order to evaluate the effectiveness it is first necessary to establish the goals of the program. Effectiveness only has meaning in terms of program goals. The more specifically the goals are stated the more accurate can be the evaluation. Within the framework of the goals of rehabilitation, it is then necessary to know (1) the client's status in terms of these goals at entry into the program, (2) client's status at closure, (3) an index of client change, and (4) the degree to which rehabilitation services contributed to the change in client status. The first three items involve a direct assessment of the client in terms of the goals of rehabilitation, while the fourth usually involves the comparison of rehabilitation clients with similar nonclients.

A measure of the client's status at entry into the program gives information about the population being served. The target population for rehabilitation is the nation's disabled; however, the term disabled covers a wide range of client problems with varying degrees of severity. Simply classifying a client in terms of a medical diagnosis does not focus attention of the appropriate client attributes. The work of rehabilitation is centered around the functional abilities and limitations of the client. Therefore, type and severity of disability must be measured in the framework of the client's functional abilities and limitations. Information of this type also provides a baseline for the measurement of change. The client's status at closure should be measured along the same functional criteria that his status at entry was measured. This provides the information necessary to (1) determine whether the goals are being reached, and (2) allows for the development of a client change index. The 26 closure system presently provides some indication of the client's status at closure. Limited economic indicators are also available. However, measures are needed to reflect changes in the physical, vocational, educational and psychosocial functioning. Measurements in these areas are needed to adequately establish the outcome of the rehabilitation process.

Parsimoniously stated, client change is essentially the difference between the client's level of functioning at entry and the client's level of functioning at closure. Since success and failure are not absolute qualities, it would be extremely valuable to know the amount of change and measure the varying degrees of success or failure. It is quite possible that clients benefit significantly from rehabilitative services without ever reaching the desired goals, that of the 26 closure.

These three components of measurement are assessments of what happens to the client and are a prerequisite of any, except a perfunctory, program evaluation. Only after the client's functional levels (at entrance and exit) and the change associated with them are established, can the effect of rehabilitation services toward producing these changes be determined. This is the next essential step in determining program effectiveness. The determination of the effect of program services in producing client change ideally involves the use of nonclient control groups, however, this approach is not practical and involves ethical considerations. The control group situation will probably, and rightfully so, remain in the providence of special studies rather than being a systematically implemented method of program evaluation. Often it is assumed that a program's services had a major effect in producing client change. Even without making the above assumption, if the first three elements are satisfactorily measured, it is possible to investigate differences in programs serving the same type of client, increases or decreases in program effectiveness over a period of time, and whether there is any change in the clients from any source. For example, if Program A and Program B are serving the same type of client, and Program B clients show more improvement, the evaluator can start looking for the variables that account for the increased efficiency in B. Similarly, program improvement over time would be open for investigation. It can be seen that measurement of client status at entry, closure, and client change does not by itself satisfy the needs of program evaluation. They do, however form the essential prerequisites of evaluation.

Given the measures discussed above, it becomes possible to evaluate the many variables that might be associated with client change. This evaluation includes not only client characteristics and treatment effects, but cost and administrative variables. In addition to making statements about present program efficiency, it becomes possible to more accurately estimate the effect of program changes and determine whether the changes actually occurred after program adjustments were implemented.

It should be noted that the preceding discussion has discussed measures of program effectiveness. Attempting to evaluate the counselor effectiveness before program effectiveness is a case of getting the cart before the horse. As Olson stated:

> "If the true output of a public agency is not known, neither can the contribution to output of any particular employee, procedure, or other input be known (Olson, 1973, p.40)."

To relate the concept of case difficulty to the effectiveness measures discussed above, a distinction should be made between client difficulty and case difficulty. Client difficulty refers to the functional limitation of the client. These are the problems the client must adjust to and live with, regardless of whether he receives the help of vocational rehabilitation. Case difficulty would include client difficulty, plus variables such as availability of transportation and facilities, money, medical technology, and other factors. In order to evaluate the counselor, many variables must be taken into consideration other than client difficulty. As mentioned above, many professionals in vocational rehabilitation would like a simple index score to indicate effectiveness and efficiency. It is highly unlikely that any number, whether it is the number of case closures or weighted case closures, will be able by itself to reflect the quality of work done by the individual counselor. However, with adequate effective measures, judgments can be made on the effect of services on the client and in turn the sources of these effects can be studied.

Chapter II

REVIEW OF THE LITERATURE

Case Difficulty

Silver (1967) designed a study to evaluate the efficacy of weighting case closures. She utilized three scales which employed counselor ratings of difficulty, with difficulty defined as the amount of time and effort required to reach case closure. Fifteen disabilities were studied and ordered by all three scales. In each of the three scales tendencies toward clustering were noted. When all three scales were considered the following arrangement emerged:

Rank 1. Cerebral Palsy (most difficult)

Rank 2. Mental Illness
Epilepsy
Amputation of Upper Extremities
Paraplegia
Post Stroke
Mental Retardation
Amputation of Lower Extremities
Cardiac Condition

Rank 3. Arrested Tuberculosis
Hearing Loss
Diabetes

Rank 4. Dental Problem
Hernia

(Silver, 1967, p.53)

Silver did not go on to develop an actual weighting system noting such a system should include more than one client characteristic, i.e., disability.

Several attempts have been made to devise systems of weighting cases; however, most of these systems are based wholly on successful closure (e.g. status '26') as a measure of success.

Miller and Barillas (1967) studied 6,256 case closures in terms of four variables: education, disability, age, and referral source. Subpopulations were derived by matching clients on these variables. The percentage of successful closures for each group was compared with the percentages of all other closures for that group. The Strong Tables for weighting differences in percentages (England, 1961) were used to assign weights for each subpopulation. They reported that the weighted closures correlated negatively, although at a statistically nonsignificant level, with the number of successful closures. This was interpreted by the authors to suggest that any increase in number of successful closures may be the result of working with easier cases.

Wallis and Bozarth (1971), using essentially the same technique as Miller and Barillas (1967), developed two weighting systems to differentiate complexity of cases. Only those cases accepted for services were studied. The systems were as follows:

> System I: This system utilized variables of age (35 years and less, 36 years and more), and education (8th grade and less, 9th grade and more). The disabilities were classified into six major categories: Visual impairments; hearing impairments; orthopedic deformity of functional impairment; absence of amputation of major or minor members; psychological impairment - mental, psychoneurotic, and personality disorders; and other disability conditions.
>
> Type of previous service was used as a fourth variable. This included: no prior service; previous rehabilitation; previous nonrehabilitation; and previous ineligible.
>
> System II: This system allowed for finer differentiation of age (19 years and less; 20 through 44 years; 45 and over) and education (8th grade and less; 9th through 12th grades; 13 grades and over). Disability groupings were the same as those used in System I (Wallis and Bozarth, 1971, pp. 56-57).

Rationale for method of assignment of weights was based upon the model by Miller and Barillas (1967) cited earlier.

System I generated twenty-four subgroups of which only three had weights (i.e. greater than one.) Of the thirty-five subgroups generated by System II, only four had significant weights. This indicated that the major proportion of clients were rehabilitated regardless of their subgroup.

Therefore, the authors leave open the possibility that the most complex cases may be a subset of those cases not accepted for services, and therefore, not included in the study. The authors concluded that:

> . . . the weighting systems investigated offered no better assessment than the present closure goals which allows one credit for each 26 closure (Wallas and Bozarth, 1971, p. 58).

Sermon (1972) used a slightly different approach and developed an Index of Case Difficulty based upon a formula of national success rates for disability categories. A Case Difficulty Index (C.D.I.) was computed using the formula:

$$\text{C.D.I.} = (1.000 - P) \times 10$$

or

$$\text{C.D.I.} = Q \times 10$$

Where:

C.D.I. is case difficulty index for any given disability category.

P is percent rehabilitated nationally for any given disability category.

Q is percent not rehabilitated nationally for any given disability category.

This method gives a possible range from 0 to 10 of any disability category. From this measure a Total Weighted Closure Index (TWCI) is derived by summing the C.D.I. for all clients on a caseload. The Average Weighted Closure Index (AWCI) was the average C.D.I. for a given caseload.

Computing AWCI's on the thirty Minnesota counselors, Sermon (1972) found that AWCI's correlated .32 with the number of cases rehabilitated. The TWCI's did discriminate between counselors with equal or similar numbers or rehabilitations, but no information is given as to whether the discriminations were valid in terms of the difficulty these cases represented to the individual counselors. The advantages of this type of index is that it is simple and adjustable yearly. However, by using percent rehabilitated in each disability group as a base measure and establishing the base on a national sample, the effect of other variables is averaged out.

While simple single factor indexes may be of little real utility, Kunce (1971) warns that highly sophisticated procedures, may lead to "statistical overkill". Kunce and Miller (1972) developed a simplified prediction index which employed data available from the standard closure form (R-300). The index as composed of twelve variables, the authors considered as having a "common sense" relationship to employment. The variables were (1) age, (2) selective service (rejected vs others), (3) race, (4) number of dependents, (5) education, (6) weekly earnings at acceptance, (7) employment at acceptance, (8) welfare status, (9) social security disability status, (10) presence of secondary disability, (11) marital status, and (12) previous client status. Index scores could range from 0-24, with higher scores having a more favorable prognosis.

Of the thirty-six possible relationships, chi square analysis showed thirty were significant at the .01 level in the hypothesized direction while three were significant in the opposite direction. Fewer young clients were placed than expected and single clients did better in terms of placement in competitive employment and weekly earnings than expected. The index total was significant at the .001 level to the three criteria. Index totals correlated

.24 with rehabilitation outcome, .26 with work status, and .35 with earnings at closure. Stepwise regression analysis yielded multiple correlations of .31 with rehabilitation outcome, .37 with work status at closure, and .35 with earnings at closure.

Kunce and Miller concluded that:

> These results provide substantial evidence for the validity generalization of the simplified prediction procedure used in previous studies (Kunce and Miller, 1972 p.505).

The authors so far have defined difficulty in terms of the presence or absence of various client characteristics associated with successful closure. However, this approach has not been overly productive. Much of the problem lies with the use of the ambiguous status 26 closure as a measure of rehabilitation success. An individual client can vary considerably in terms of "difficulty" depending on whether his vocational goal was competitive employment, sheltered employment, homemaker, or unpaid family worker. Since the "26" closure is used as a measure of "success" of the client, it is not surprising that this research has accomplished little toward measuring the difficulty with which the success was achieved.

Kunce and Miller made a small departure from the basic closure criterion. Miller and Barillas (1967) also attempted to correlate their index with other measures of client satisfaction and supervisor ratings of the counselor; however, all correlations were nonsignificant. Wallis and Bozarth (1971) indicated their system is no better than present closure goals. The most successful index of difficulty was reported by Kunce and Miller. However, the authors did not address themselves to counselor time and effort.

Goff (1969) attempted to develop an index of difficulty using as criteria something other than closed rehabilitated or nonrehabilited. The average time, computed in months, from the client's acceptance to closure was considered an indicator of difficulty. However, assumption that time on caseload is directly related to difficulty is questionable. While in some cases time on caseload may indicate the severity of the disability or a motivational deficiency, in other instances it may only indicate that the client is in an extended training program. The multiple correlation was only .17 when all sixteen demographic variables were included. It is difficult to ascertain whether the low multiple correlation was due to the variables studied or the use of average time on caseload as a measure of difficulty.

Kunce, Mahoney, Campbell, and Finley (1969) found no relationship between treatment time and either job placement or job salary with culturally disadvantaged clients. However, there was a significant relationship ($p<.01$) between treatment time and job level. The relationship probably reflects the effects of longer training programs as treatment time was significantly related to intelligence ($p<.05$). Other than training potential, time on caseload may be measuring the client's educational aspirations (college vs trade school), the amount of time the client feels he can devote to training, caseload management variables or a multitude of other factors.

Although time on caseload may be an unreliable indicator of case difficulty, counselor time spent on an individual case might be more valuable. However, accurate information would be difficult to procure in any large scale research and be tremendously difficult to implement on an ongoing basis. When evaluating the importance of counselor time it would be important to consider the type of activity the counselor would be engaged in during the time he has recorded. Otherwise, the filling out of routine forms would have weight equal to counseling and guidance with an extremely difficult case. Recording the type of activity in which the counselor was engaged would further complicate the task of gathering data and increase the amount of counselor time spent in routine clerical tasks. Even if the data on counselor time were available, the question would remain whether the measure would reflect case difficulty or the efficiency with which the counselor manages his time. A system of weights for case difficulty based on counselor time may only serve to penalize good caseload managers.

Lawlis and Bozarth (1971) analyzed cost and administrative variables in a stepwise regression with "rehabilitations per counselor". The strongest partial correlation was with "average cost per rehabilitation" (r= -.68) and "case services expenditures average per counselor" (r= .45). The authors suggested that average case service expenditures per counselor is a "quantity" type of measure showing that if counselors spent more money on more people, the result is more rehabilitations. They suggest that the more money spent per rehabilitation is a "quality" measure indicating counselors are working with more complex cases. However these variables may be more concerned with availability and utilization of resources than the difficulty of a particular client or caseload.

Kunce, et al (1969), when looking at the relationship between cost of services provided to culturally disadvantaged clients, found that cost of services was unrelated to job placement, job salary, or yearly income. However, cost of services was related to job level, which the authors explain as reflecting expenditures for training.

It should be remembered when comparing the results of Lawlis and Bozarth, and Kunce, et al, the criterion variable in Lawlis and Bozarth was rehabilitations per counselor, while in Kunce, et al, the criterion variable was job placement, salary, and yearly income. Again, as with time on caseload, cost variables may indicate difficulty in some cases. Cost can vary due to considerations unrelated or only tangentally related to difficulty; such as, localized cost differences for providing the same services, training potential, willingness to engage in long term training, or caseload management variables.

Even if a case weighting system could be based on cost and administrative variables, it may be dangerous to implement as an ongoing system. By evaluating counselors and agencies on the bases of case service expenditures, time on caseload, etc., the system may effectively transfer the focus of attention from the client's problem and needs to administrative procedures. As an example, if a negative weight is attached to case service expenditures, the message to the counselor is "don't spend money or your evaluation will go down." Of course, the opposite message is sent if a positive weight would be used. The system will react to whatever weighting system is devised. In fact, abuses encouraged by the present closure system is much of the reason behind the search for a weighting system.

Presently, the most critical problem in case difficulty research is the inadequacy of available criterion variables. The use of the status "26" closure as a criterion of success has accomplished little. Before preceding to further investigate the variables that impede success and make cases difficult it would be profitable to first adequately measure success. It would be far more meaningful to relate variables to aspects of client change or gain than to artificial success - failure categories.

Client Change

To adequately measure client change, it should be remembered that the client's disability does not exist by itself, but in a physical, psychological, social, and economic context that places both restrictions and demands on the individual. The client's ability to cope with his situation requires that he acquire or maintain at least a minimum level of functioning in all of these areas.

Krantz (1971) includes behaviors toward supervisors and co-workers in his listing of critical vocational behaviors. He also lists critical employment-coupled behaviors under the general headings of social living competencies, community living competencies, and general and personal living competencies. These, he states are:

> . . . other behaviors, not directly vocational, which must be emitted by the client at a critical minimum in order for him to function in employment (Krantz, 1971, p. 15).

Whether it is called ego strength, interpersonal competence, ability to cope, social competency, maturity, or self-sufficiency, an adequate measure of rehabilitation outcome must have some measure of the client's ability to be personally, as well as financially, independent. The client's ability to make appropriate decisions, act on them, and establish good personal relationships, is essential to the client's long range success and continued independence.

The basic requirements of an expanded change measure are: (1) the measure should reflect the real world concerns of vocational rehabilitation, (2) be administratively feasible, and (3) give reliable information when used across agencies, programs and counselors.

Administrative limitations include (1) the amount of time available for measuring change, (2) the amount of time available for training in the use of the instrument, and (3) the capability of being implemented without modifying the present service delivery system.

Recognizing the inadequacy of present closure system Reagles, Wright and Butler (1970) developed the Rehabilitation Gains Scale to assess the feasibility of considering rehabilitation gain as a single scalable variable. The scale utilized self-reported data on such items as physical condition, source of income, weekly earnings, chances of getting a job, future plans, mental health, and social activities. The scale is a pre- and post-rehabilitation measure which gives a pre-level, post-level, and gain score for each client.

In general, the items are suitable for a self-report instrument. Items concerning the client's problems finding a job, social activities, type of job and weekly earnings can be fairly reliable if the client were cooperative. However, serious questions can be raised concerning the reliability and validity of responses when the client is asked to rate his physical health, mental health, and emotional adjustment.

In attempting to establish reliability and validity, the authors used a reciprocal averaging (RAVE) technique in analyzing the data and concluded that the single variable, rehabilitation gain, could be operationalized in this way:

> The reliability coefficient yielded by the RAVE analysis (.71) was interpreted as moderately high for a scale composed of many seemingly unrelated items. The pattern of derived weights, item-to-total score correlations, and inter-item correlations were all in acceptable limits and added support to the feasibility of constructing a scale of rehabilitation gain (Reagles, Wright, and Butler, 1970, pg. XIII-58).

The authors note that selection of items was limited to items already in the Woods County Project, Client Test Battery and, therefore, the scale limited in scope and did not fully reflect rehabilitation gain.

A major problem when using self-report instruments is the response rate. Self-report instruments require the client be both available and cooperative. Although clients closed rehabilitated may be willing to cooperate, questionnaires and test materials may be impractical for measuring change in cases closed not-rehabilitated.

Hills and Ledgerwood (1972a, 1972b) report response rates on a consumer measurement questionnaire. The questionnaires were either handed to the client or mailed to the client at closure. The average response rate was 13% in North Dakota for all closure categories. In New Mexico, questionnaires were mailed to "26" closures, the response rate was 26.6%. This indicates that a self-report instrument may not be feasible for use outside of a research setting.

The original problem has now expanded to developing a measure of client change in physical, educational, economic, vocational, and psychosocial areas, which (1) requires only ten minutes of the counselor's time, (2) is simple to score and interpret, (3) requires little training, (4) applicable to all clients, and (5) utilizes information provided by the counselor.

Some of the data needed for a measure of client change are presently being gathered. Job status, weekly earnings, academic education, and public assistance status are important aspects of change and present no large scale measurement problem. However, the physical, psychological and social changes are not as easily measured. In fact, considering the limitations mentioned above, it would seem necessary to rely on some sort of professional judgment on the part of the counselor for the measurement of many aspects of change. If this is to be the case, great care must be taken to insure that the judgments made are sufficiently standardized to allow comparisons across counselors and agencies.

Rating scales have been used with varying degrees of success to measure change in social work (Geismar and LaSorte, 1964; Hetzler, 1963; Hunt, Blenkner, and Kogan, 1950) and psychotherapy (Rogers, 1959; Tomlinson and Hart 1962).

The advantages of rating scales are that: (1) they do not require the presence or overt cooperation of the client, (2) they are easy to score, and (3) they require little time to complete. A major pitfall with the use of rating scales is that of inter-rater reliability. Even if the instrument is conceptually sound, the items must have adequate inter-rater reliability. This is critical if the instrument is to be used on a large scale, such as in vocational rehabilitation agencies, and little time can be devoted to rater training. Hetzler (1963) attempted to free himself of this difficulty by using items that involved only observations of physical situations or highly structured ratings. Such models have not been broadly accepted due to the difficulty of establishing a direct meaningful relationship between case severity and movement in social work and physical situations, such as, possessing an alarm clock, telephone, sofa, type of floor covering, and food shopping habits.

On the other extreme is the movement scale developed by Hunt, Blenkner, and Kogan (1950). They asked for a global rating of movement in social casework on a scale from -2 to +4. With the method Hetzler used, the major problem is establishing validity. With vaguely defined rating scales, the problem is reliability. Somewhere between these two extremes there should be a method of devising rating scales that could be completed by the rehabilitation counselor that would have satisfactory reliability and still reflect the client's status in terms of the goals of Vocational Rehabilitation.

Chapter III

THE SERVICE OUTCOME MEASUREMENT FORM

Initial Considerations

In order to structure the project and instrumentation to satisfy administrative needs and parameters of research design, an Advisory Committee was formed consisting of state administrators and rehabilitation research personnel (see appendix A). At the first Advisory Committee meeting the basic prerequisites of an administrative feasible system of weighting case and measuring client change were established. It was determined that an administrative feasible system could require not more than ten minutes of the counselor's time per case. The committee also recommended that procedures be found which could be used at all levels within vocational rehabilitation, be applicable across state lines, require very little in-service training, apply equally to counselors carrying different types of caseloads, and require no changes in the service delivery system. Since state agencies are not homogeneous in their ability to process data, the project staff must also be sensitive to varying levels of agency sophistication and develop a system which could be applied to agencies not having sophisticated electronic data processing equipment.

Within this framework the measures developed were to be capable of measuring client change in economic, vocational, physical, educational and psychological areas of the client's life.

Implicit in such a measurement is counselor judgment. The idea of the counselor "beating the system" was discussed. This was not seen as a major problem, as most counselors are professionals and sincerely desire to serve people. In fact, it was noted that, counselor judgment was currently the basis for determining many of the services provided and the outcome of these services. The States Advisory Committee provided the basic framework for the development of Services Outcome Measurement form and the form's subsequent testing.

Employability Model

An extensive review of the literature yielded over 100 variables and combinations of variables that might be related to case difficulty, client change, and rehabilitation success. These variables ranged from age, race, and sex to ego strength, environmental stress, and social class identity. Measurement of the variables ranged from counting procedures to vague judgments of ill-defined psychological traits. Medical models used when speaking of the client's adjustment and demographic characteristics for administrative efficiency. What is needed is an employability model stated in terms of client's functioning in relation to behaviors and attitudes necessary to acquire and maintain gainful employment. The problems counselor and client face in an effort to establish the client in an employment situation can be greatly distorted if couched in medical and psychiatric terminology. The problem in rehabilitation is not cerebral palsy, glaucoma, malignant neoplasm, or schizophrenia, but more, the type of job the client will be able to hold, what the client wants to do, and the steps necessary to help the client reach his potential. This is not to say that medical information is unimportant, but that the emphasis should be on employment related behavior. Vocational Rehabilitation is charged by law with helping disabled people reach the goal of employment. In working toward this goal, the rehabilitation counselor works in many areas of the client's total life. These areas may be categorized as physical, educational, vocational, economic, and psychosocial. Within these areas the client's strengths and weaknesses in terms of employability should be established.

In the area of physical functioning, a client's ability to work, his endurance, and his available career choices should be established. Does the client have or can he develop skills which help compensate for his disability? Does he have secondary or multiple disabilities with which he must cope? What is the client's general health status other than the disability? Will the client miss work often?

The client's educational background, learning ability, and present skill level are important considerations for an employability model. Relevant to the model are the relationships to the client's job skills to the current labor market, and the availability of training.

The vocational and economic areas should address themselves to the client's work status, employment type, his dependence on others for financial support, and financial problems that lead the client to terminate services early.

The psychological and social effects of the client's disability are the most difficult to measure, but information is needed in reference to prevocational skills and other social skills. How does the client identify with the worker role? Will he be able to get along with co-workers and supervisors? Are his employment expectations realistic? Is the client able to make decisions and implement plans for attaining future goals? Is his family supportive, or do they misunderstand his illness and present an obstacle to the client's rehabilitation?

These are the types of questions an employability model should ask in rating client status and change. These are not factors unrelated to the medical and psychiatric models, but they concern themselves directly with the work of vocational rehabilitation. These are questions the counselor deals with everyday and the answers determine his actions for every case. An employability model does not ask the field staff to collect new information. The development of a measure of difficulty and change from an employability model, involves quantifying and organizing data and judgments a counselor uses in everyday practice. Within the context of an employability model, it will be possible to establish the client's level of functioning on entry into the program, thereby establishing the severity of the handicap. At closure the client status on the same variables must again be measured. The final measure not only gives information as to the client's status at closure, but also, when compared to the previous measure, provides an index of client change.

Development of the Service Outcome Measurement Form

Originally, over 150 items were derived and borrowed from previous research, or developed by the staff to cover over 100 variables that the literature indicated might be related to case difficulty, rehabilitation success, and client change. Items were progressively deleted and rewritten until a trial form was developed which included only 42 items. Deletion and revision of the items were done by the project staff with the cooperation of administrators and several counselors of the Oklahoma Rehabilitation Agency. Twenty counselors were then selected by administrators and supervisors to complete the trial form on two of their clients and give their comments on the form. In particular, the counselors were asked to comment on the clarity of ratings, appropriateness of the items, the appropriateness of the levels within the items, and whether the information requested could be accurately estimated at referral, acceptance, or closure.

Following revisions, a form containing 41 items was presented to the States Advisory Committee. The version of the Services Outcome Measurement (SOM) Form used in the field test was subsequently developed. The form as tested in this study appears in appendix B. It contains 22 items of demographic data and 23 five point rating scales divided into five areas. A sixth area contained education items.

The first three items on the SOM Form are for identification purposes and include state code, counselor number, and client number. Items 4 through 18 are demographic data selected for inclusion in the study on the basis of having been significant in at least two previous studies (Items 5-9, and 11-18) and/or utility for sample description (Items 4-5). Item 10 is unique to this study. The other four items of demographic data form Area II-Education.

The 23 five point rating scales divided into five areas: Difficulty (5 scales), Physical Functioning (6 scales), Adjustment to Disability (3 scales), and Social Competency (4 scales).

The scales were written as much as possible within the framework of an employability model. In this framework it is possible to standardize the counselor's perceptions and knowledge of the client by the use of behaviorally anchored rating scales with emphasis placed on the client's functional abilities in relation to employment. For example, rather than ask the counselor to rate the client's adherence to the values of the larger social order, the following scale was developed:

A. Identification with Worker Role

_____1. Client feels personal need to be independent, and to do his share
_____2. Identity to worker role developing or deteriorated somewhat since disability but wants to work
_____3. Weak identity to worker role, little idea of day-to-day work demands
_____4. Client has adjusted to being dependent: talks of working but is unconvincing
_____5. Client strongly identifies with handicap and clings to dependent role.

Rather than use medical terminology the counselor was asked to rate scales in the physical area in terms of the client's ability to function such as:

D. Work Tolerance

_____1. Minimal restrictions to type of work client can do
_____2. Occupations limited to light physical activity but able to work full time
_____3. Sedentary work, low stress, or close supervision required; but able to work full time
_____4. Unable to work full time because of mental or physical condition
_____5. Current disability status precludes employment

Social skills were also seen as much as possible in relationship to employment, however, this was not always possible. Following are two examples from the Social Competency area, relating to use of language and family support.

A. Language Facility

_____1. Reads and writes well; has no trouble understanding and communicating common vernacular and could learn to use technical language.
_____2. Reads, speaks, and writes adequately; has no particular problem filling out employment applications, or holding job interviews.
_____3. Reads, speaks, and writes adequately for job applications and interviews, but speaks slowly and may have some difficulty with other than simple written instructions.
_____4. Reads, speaks and/or writes poorly, and will have difficulty interpreting even simple written instructions.

_____5. Almost complete lack of language, functionally illiterate, extremely small vocabulary.

D. Family Support

_____1. Good; family shows great deal of understanding of client; very supportive and helpful.
_____2. Moderate; although not ideal, support is adequate.
_____3. Fair; support given but is inappropriate; evidence of underlying ambivalence on the part of the family.
_____4. Poor; support given but there is definite indifference on the part of the family toward client or his rehabilitation.
_____5. Very poor; family definitely nonsupportive, strong opposition.

The twenty-three rating scales used in the final form were subdivided into areas as follows:

I. Difficulty -- Unlike the other five areas in the instrument, this area does not establish a present level of function, but rather is intended to strengthen the instrument as an index of difficulty. Scales in this area are entitled: (A) Anticipated Change in Client's Level of Functioning During Services; (B) Employment Prognosis; (C) Work History; (D) Availability of Facilities and Client's Attitude Toward Temporary Relocation; and (E) Availability of

Transportation

II. Educational Status -- Rating scales are not included in this area. The counselor is asked to record the number of years of academic education, the number of months of trade or vocational school, on-the-job training, and adjustment training.

III. Economic/Vocational Status -- A client's present level of functioning in economic and vocational areas is included in this area. The scales are: (A) Vocational Level; (B) Weekly Earnings; (C) Work Status; (D) Primary Source of Support; and (E) Dependency of Client on Others for Financial Support.

IV. Physical Functioning -- The scales in this area refer to the client's present physical health in terms of relevance to a work situation. The scales are: (A) General Health Other Than Disability; (B) Mobility; (C) Physical Independence for Tasks Other Than Mobility; (D) Work Tolerance; (E) Prominence of Vocationally Handicapping Condition; and (F) Compensatory Skills.

V. Adjustment to Disability -- This area attempts to rate the client's present adjustment to his disability in relation to critical employment attitudes. The scales are: (A) Identification to Worker Role; (B) Compatibility of Employment Expectations with Client's Personality and Physical Condition; and (C) Client's Confidence in Himself as a Worker.

VI. Social Competency -- This area tries to establish a general idea of the client's present ability to function in society exclusive of what was covered in the previous areas. The scales are: (A) Language Facility; (B) Decision-Making Ability; (C) Role in Family; and (D) Family Support.

Area scores consist of the sum of the ratings for the scales in that area divided by the number of scales in the area. A total score was computed by summing area scores.

Each of the five points within the scales have anchoring definitions. An instruction manual was written which provided a detailed explanation of the meaning for each scale and included a set of practice exercises. Having designed the instrument, the next step was to test its reliability. The problem of inter-rater reliability was especially important if the instrument was to be used in all fifty states with a minimum opportunity for rater training. This problem exists even if the instrument was attending to the appropriate variables.

Reliability

As previously mentioned, the use of rating scales has several advantages as method of measuring case difficulty and client change. The central problem with the use of rating scales is inter-rater reliability. The information gained by the reliability study therefore should shed light on two questions (1) What kind of reliability can be expected when using Services Outcome Measurement Form? and (2) Can rating scales be sufficiently standardized for use as a method of measurement in a system as large as Vocational Rehabilitation? The information gained in terms of the last question would be very valuable regardless of the value demonstrated by the individual scales in the subsequent field test.

Method

Reliability of the SOM Form was tested by having fifteen counselors rate the same ten cases. Cooperating in the reliability study were the New Mexico, Texas, and Colorado Rehabilitation Agencies. Each agency provided five counselors to rate the test cases.

Test cases for the reliability study were gathered from five Oklahoma counselors. All cases in the study were in status 10 or recently placed in status 12. Since normal case recording often provided insufficient information, the counselors were asked to dictate additional information about the client. The questions were very general, such as, "Could you give some information as to the client's family?" or "How does the client impress you personally and handle himself in his interviews with you?"

All medical and psychological information in the client's folder that had been gathered as routine case processing was included in the test cases. Some organizing and editing of cases was employed to make the cases easier to read. No alterations were made if correcting grammar changed the interpretation of the counselor's remarks.

Before the counselors rated the test cases, the instruction manual was read to them, then the counselors were asked to rate a practice case. This was not a training session, as there was not a discussion or review given on either the instruction manual or practice case. The counselors then rated the ten test cases independently and at their own speed.

Results

Product-moment correlation coefficients were computed for all possible pairs of the fifteen counselors involved in the reliability study. A pooled estimate of the correlations was obtained by transforming the coefficients, using Fisher's z (Guilford, 1956), then adding and converting back to a pooled estimate of the correlation.

In addition to correlation coefficients, the ratings of each individual counselor of all the ten cases were averaged and a mean, standard deviation, and range was computed on these averages (See table 3.1). The mean of

Table 3.1

Pooled Correlations and Distribution Characteristics Of Fifteen Counselor's Ratings Of Ten Test Case Narratives[a]

			Distribution of Characteristics		
Items	Areas	r	$\bar{X}$	SD	Range
	Difficulty Only				
I A.	Anticipated Change	.35	2.92	.49	1.50
I B.	Employment Prognosis	.56	3.03	.28	.80
I C.	Employment History	.72	3.39	.42	1.30
I D.	Availability of Facilities	.45	1.51	.34	1.00
I E.	Availability of Transportation	.70	1.29	.18	.60
	Area Score[b]	.69	2.43	.19	.70
	Economic/Vocational Status				
III A.	Vocational Level	.42	3.33	.48	1.60
III B.	Weekly Earnings	.98	4.20	.07	.40
III C.	Work Status	.92	3.39	.26	.80
III D.	Primary Source of Support	.92	2.95	.15	.40
III E.	Dependency on Others for Financial Support	.92	3.89	.21	.90
	Area Score	.95	3.47	.14	.54
	Physical Functioning				
IV A.	General Health Status Other than Disability	.47	1.57	.27	1.00
IV B.	Mobility	.57	1.28	.15	.60
IV C.	Physical Independence	.70	1.17	.18	.50
IV D.	Work Tolerance	.55	1.96	.35	1.40
IV E.	Prominence of Vocationally Handicap. Condition	.78	2.37	.18	.70
IV R.	Compensatory Skills	.31	2.69	.39	1.60
	Area Score	.75	1.84	.13	.35
	Adjustment to Disability				
V A.	Identification w/Worker Role	.73	1.86	.27	.90
V B.	Employment Expectations	.59	1.97	.30	1.20
V C.	Client's Confidence in Himself as a Worker	.65	2.08	.27	1.10
	Area Score	.79	1.97	.23	.83
	Social Competency				
VI A.	Language Facility	.79	1.92	.21	.60
VI B.	Decision-Making Ability	.72	2.02	.22	.90
VI C.	Role in Family	.78	2.12	.22	.70
VI D.	Family Support	.84	2.39	.25	.90
	Area Score	.89	2.11	.15	.55
	Total Score[c]	.93	11.82	.50	1.91

---

[a] Correlations were computed for all pairs of counselors, then transformed using Fisher's z, averaged and converted back to correlations. Each counselor's ratings of the test cases were averaged and a $\bar{X}$, SD, and Range were computed for the averages.

[b] Area scores are the average score of items within the area.

[c] Sum of area scores.

these averages provides an indicator of where the clients fell on the five-point scales. The standard deviation of the averages and the range is given to reflect any consistent error or "halo effects" and the magnitude of the error.

Consistent error or "halo effects" refers to the tendency on the part of an individual rater to rate all persons generally high or generally low.

Area I Difficulty -- Area scores were derived by summing the five scales in the area and dividing by five, thus putting all scores back on a five-point scale. The mean inter-judge reliability coefficient for this area was .69 with the mean of the average of the counselors being 2.43, a standard deviation of .19, and a range of .70. Though this area included some of the more unreliable scales, the reliability for the total area was good. The total range of the means of the counselors' ratings of the ten test cases being less than one scale step.

Scale I D. Availability of Facilities, and Scale I E. Availability of Transportation were not given a rigorous test in this study. The mean of the counselors' ratings for I D. of 1.5 and Scale I E. of 1.29 indicated that the test cases fell largely in the upper levels of the scale.

However, the most noticeable fact in this area is that although some of the scales had relatively low reliabilities, the area score, as a whole, seemed to have good reliability.

Area II Education -- The educational area does not involve use of a rating scale.

Area III Economic/Vocational Status -- The inter-judge reliability of this area was .95 with a total range of the mean of the counselors' ratings of .54. The reason for this unusually high reliability was felt to be due to the explicitness of the scales. The only scale with a reliability of under .92 was Scale III A. Vocational Level. It had a reliability of a .42 with a range of 1.60. After reviewing the original data it was felt that this low reliability and large range was due to some counselors rating the client's present vocational level at acceptance, while other counselors had misunderstood the instructions and were rating the client's vocational level as it would be after services. This situation can be easily remedied by more explicit instructions.

Area IV Physical Functioning -- The inter-judge reliability coefficient for this area was .75, with a mean of 1.84. This might indicate that both ends of the scale were not adequately tested. In three of the test cases the clients were severely physically handicapped, however, the range was narrowed by test cases where the client's handicap was personality, character, and behavior disorders and a physical handicap was not present.

Area V Adjustment to Disability -- The inter-judge reliability for this area was .79 with a mean of the ratings being 1.97. Scale V B. Employment Expectations and Scale V C. Client's Confidence in Himself as a Worker had ranges of 1.20 and 1.00 respectively, which indicates that there is some consistent error on these scales. For the area as a whole, the range is .83 which is still under one scale step.

Area VI Social Competence -- This area did better than expected with an inter-judge reliability of .89. No scale in this area had a range of as much as one step in the counselors' ratings and the lowest correlation for rating for the area was .72.

Total Scores -- Total scores for all areas proved to be more reliable than individual scales or area scores. The total scores, obtained by summing all the area scores, had a reliability of .93. The range of the means of the counselors' ratings of the ten clients was 1.91 even though the possible range had expanded from one to five to a possible range of five to twenty-five. Averaging the total scores given to each client by the counselors, the "easiest" client (in terms of total scale scores) received an average total score of 8.82 while the "hardest" client received an average total score of 16.77.

It was hoped that by anchoring the five points of the scale as much as possible in behavioral terms, any "constant errors" or "halo effects" would be kept under one scale step. This goal was reached in fourteen of the twenty-three individual scales, and all of the area scores as indicated by the range on the means of the counselors' ratings of the ten test cases.

Discussion

Results of this study indicate that carefully anchored rating scales can be constructed with sufficient reliability to provide a method of establishing client's physical, educational, and psychosocial functioning in relation to employment. Furthermore, these scales are administratively feasible. The counselors involved in development of the scales were very positive as to the value of the scale and possibility of using the instrument as an alternative to "26" closures as a method of measuring the effectiveness of vocational rehabilitation services. Having demonstrated the reliability of SOM Form, the next step is to test the scales in the everyday vocational rehabilitation setting.

Chapter IV

FACTOR ANALYSIS OF THE SERVICE OUTCOME MEASUREMENT FORM

Although the Rehabilitation Service Outcome Measurement (SOM) Form has substantial "face validity," a factor analysis was undertaken to (1) group these client attributes into the most meaningful subgroups for the measurement of change, and (2) to give insight whereby redundancies of the scales may be minimized with resulting improved administrative efficiency. In reference to the second purpose, item-total correlations were not used because with the small number of scales contained in this form, each scale contributes heavily to the total score.

Method

The SOM Form was completed by 389 vocational rehabilitation counselors on 1,945 clients in six state agencies. Each counselor completed the scales on the next five clients he accepted for services after July 1, 1972. The participating counselors were composed of all counselors from Utah (65), Texas-Blind (55), and a random sample of counselors from Maryland (78), Oklahom[illegible] (71), and Tennessee (74).

Forty-six counselors were included from Michigan on a volunteer basis.

The sample clients included: 1,016 men and 929 women, 1,459 white and 486 non-whites, and 619 married clients, 894 never married and 216 divorced, 132 separated, and 84 widowed. The mean age of clients was 30.64 and the average age at onset of disability was 20.7. Both mental and physical disabilities were represented in the sample, including: Blind-367, Hearing-67, Orthopedic-331, Amputations-45, Psychoneurotic-574, Mental Retardation-190, Other-371.

Both oblique and orthogonal rotations were considered and originally performed on the data. The results of both rotations were very similar. Since the orthogonal rotation is simpler mathematically, is more easily interpreted and allows the items to cluster more clearly into factors, it was the only rotation reported. The program used for the factor analysis was BMD X72 from Biomedical Computer Programs (Dixon 1971), which performs a principal component solution and an orthogonal rotation of the factor matrix.

Input into the program was all rating scales from the SOM Form and Educational Item II A, Years of Academic Schooling.

The Service Outcome Measurement Form was developed to measure client status in the Educational, Physical, and Psychosocial areas as well as the traditional Economic/Vocational areas. Therefore, the first factor analysis requested only four factors. In subsequent factor analysis five, six, and twelve factors were sought.

Results

The five factor analysis will be presented since the four factor analysis confounded the scales in the Educational factor with the Psychosocial scales in Factor I. Analysis requesting six or more factors, yielded no additional information pertaining to the basic structure of the data system. Table 4.1 lists the factors and their loadings in the different analyses. Factors are presented in the order determined by the five factor analysis.

In the five factor analysis, Scale VI A. (Language Facility) also had a substantial loading (.41) on the Psychosocial factor and item VI B. (Decision Making Ability)

Table 4.1

Factor Loadings For High Loading Scales On
Service Outcome Measurement Form
When Four, Five, Six and Twelve Factors Are Rotated

		Factor Loadings			
		Number of Factors Rotated			
Factor I	Psychosocial	Four	Five	Six	Twelve
V-C	Confidence as Worker	.73	.77	.62	.74
VI-B	Decision-Making Ability	.77	.67	.45	.72
V-A	Identification w/Worker Role	.67	.72	.58	.71
V-B	Employment Expectations	.59	.63	.47	.62
I-C	Work History	.55	.54	.37	.53
Factor II	Economic/Vocational				
III-E	Financial Dependency	.94	.94	.96	.94
III-B	Weekly Earnings	.86	.87	.88	.87
III-C	Work Status	.78	.78	.79	.79
III-D	Primary Source of Support	.71	.72	.72	.72
I-B	Employment Prognosis	.54	.53	.54	.53
Factor III	Family Relationships				
VI-D	Family Support	.90	.89	.71	.90
VI-C	Role in Family	.85	.86	.72	.85
I-D	Availability of Facilities	.55	.54	.15	.54
Factor IV	Physical Functioning				
IV-B	Mobility	.75	.75	.76	.74
IV-C	Physical Independence	.71	.70	.69	.75
IV-D	Work Tolerance	.50	.51	.47	.46
IV-E	Prominence of Handicap	.41	.40	.38	.27
Factor V	Education				
VI-A	Language Facility	(.68)[b]	.76	.81	.68
II-A	Years of Academic Education	(-.38)	.76	.76	.78
III-A	Vocational Level	(.41)	.37	.41	.22

[a] Factors are listed in the order rotated in the five factor analysis.

[b] In the four factor analysis the items in Factor V loaded in Factor I with the loading given in the parenthesis.

loaded -.38 on the educational factor. The scales were placed in the factor where the loadings were highest and most consistent.

Of the 23 scales and education item in the factor analysis only four scales are not included in the five factors shown in Table 4.1. Table 4.2 lists these scales and the factors on which they loaded.

Table 4.2

Factors and Factor Loadings
For Scales Not Included In One Of The
Five Major Factors When Five Factors Are Requested

Scale	Areas	Factor	Loading
I A.	Anticipated Change in Client's Level of Functioning During Services	Psychosocial Econ/Vocational	.25 .12
I E.	Availability of Transportation	Psychosocial Educational	.34 .29
IV A.	General Health Status Other Than Disability	Psychosocial Physical Function	.32 .30
IV F.	Compensatory Skills	Psychosocial Physical Function	.41 .23

The total amount of variance explained by all five factors (column variance) in the rotated matrix was 52%. The variance explained by the individual factors was

Psychosocial 14%, Economic/Vocational 14%, Family Relationships 9%, Physical Functioning 8%, and Educational 7%.

Conclusions

The factor analyses yielded five general factors. Analyses requesting more than five factors added no additional information concerning the basic factor structure and requesting four factors confounded the educational factor with the psychosocial factor. The factors were labeled Psychosocial, Economic/Vocational, Family Relationships, Physical Functioning, and Educational. These factors correspond to the initial purpose of the instrument which was to measure the status of the client in the physical, psychosocial, and educational areas as well as the traditional economic/vocational area.

The strength with which the scales concerning family relationships separated from the other psychosocial scales was not expected. The inclusion of the scale on availability of facilities with the family scales is not surprising when it is remembered that the scale requests the attitude toward temporary relocation if the facilities are not readily available.

All the psychosocial scales, except for the family scales, loaded together with substantial loadings in all analysis. Also within the psychosocial factor was Scale I C. (Work History) from the area concerned with difficulty.

The economic/vocational factor had high loadings from all the scales except III A. (Vocational Level) which loaded strongest with the educational item. Also loading substantially in the economic/vocational factor was Scale I B. (Employment Prognosis).

The physical functioning factor was also stable. Scales IV A. and IV F. did not have substantial loadings in this factor, but seem split between the physical functioning and psychosocial factor.

For the subsequent measurement of client change, the best arrangement factors appear to be: (1) Economic/Vocational Area including Scales III B. (Weekly Earnings), III C. (Work Status), III D. (Primary Source of Support), and III E. (Client's Financial Dependency); (2) Physical Functioning including Scales IV B. (Mobility), IV C. (Physical Independence), IV D. (Work Tolerance), IV E.

(Prominence of Handicapping Condition); (3) Psychosocial Area including Scales V A. (Identification with Worker Role), V B. (Employment Expectations), V C. (Client's Confidence as a Worker), and VI B. (Decision-Making Ability); (4) Family Relationships including Scales VI C. (Role in Family), and III D. (Family Support); (5) Education including item II A. (Years of Academic Schooling), and VI A. (Language Facility), and III A. (Vocational Level).

The scales that carried substantial loadings from Area I, Difficulty -- were left out of the above factored areas as they do not lend themselves to the measurement of client change. The five areas derived above from the factor analysis will be included with Service Outcome Measurement Form's original areas in subsequent data analysis. This arrangement of scales will be termed "Factor Scores" and will be compared with the original areas' scores on the form.

Chapter V

FIELD TEST OF THE SERVICE OUTCOME MEASUREMENT FORM

At this point, several important pieces of information about the Service Outcome Measurement (SOM) Form have been obtained. The reliability study indicated that counselors inexperienced with the SOM Form could make reliable judgments with a minimum amount of training. The factor analysis provided evidence for the validity of the form in terms of factor structure. In addition, a set of scores were derived that utilized only sixteen[1] of the original twenty-three rating scales, and maintained the integrity of the major factors.

The purpose of this phase of the field test was to provide further information concerning the validity of the SOM Form. To accomplish this goal, the scores derived from the form were compared with the counselor's perceptions of what was happening with his clients. More specifically the SOM Form was compared with counselor ratings of Global Case Difficulty, the time and effort spent on the case, and the severity of the client's handicap.

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[1] Factors listed in Chapter IV, pages 57 and 58.

Procedures

The sample for the field test was taken from six states; Maryland, Michigan, Oklahoma, Tennessee, Utah, and the Texas Commission for the Blind. Each state (except Michigan) provided a list of all their counselors. From these lists all counselors were included from Utah (76) and Texas Blind (71), and counselors were randomly selected from Maryland (100), Tennessee (86), and Oklahoma (77). In Michigan seventy-five counselors were initially included on a voluntary basis. Counselors were excluded from the list if they routinely transferred cases prior to closure. Of the original 485 counselors selected, 389 completed the pretest phase and 364 completed the criterion ratings on their five sample clients.

Each participating state designated a liaison person to coordinate the project's efforts in their states. This procedure proved extremely valuable. Prior to the start of the study the liaison personnel sent the counselor a letter explaining his selection as a project participant. With this letter was sent an "Overview of the Project" and "Counselor/Caseload Characteristics Form" (see appendix B). This was the counselor's introduction to the project.

The liaison personnel made themselves available to answer the counselor's questions throughout the project.

The next step was to familiarize the counselor with Service Outcome Measurement Form[2]. This was accomplished by the use of a training packet. The training packet included training instructions, a case narrative, two SOM Forms, an instruction Manual for the SOM Form, and a preaddressed envelope. The counselor was instructed to read the instruction manual and fill out the form on one of his own cases. He was then asked to complete the other SOM Form on the case narrative and return it to the project.

The liaison personnel then forwarded the research packet to the participating counselors with a letter from their office. The research packet included research instructions, five blue SOM Forms (pretest), five green SOM Forms (posttest), and ten preaddressed envelopes. The counselor was asked to complete the blue SOM Forms on the next five clients he accepted for services (status 10 and above) after the acceptance interview, and place the green SOM Form in the client's folder and complete the green form at closure or at the request of the project staff. The training and research instructions sent to the counselors have been reproduced in appendix B.

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[2] The SOM Form was termed only "Form A" throughout the field test.

Six months after receiving the blue SOM Form on the counselor's fifth client, the counselor was mailed the Difficulty Rating Form A_1 (see appendix B). This form represents the criterion measure for the study.

Form A_1 asked the counselor to make three ratings on each of his five sample clients. All ratings were made on an eleven point scale and in relation to the counselor's total caseload.

The ratings were as follows:

(1) Global Case Difficulty Rating -- For this rating the counselor was asked to rate his five clients according to the total case difficulty considering all aspects of the case. This was intended to allow the counselor as much latitude as possible in making the rating. This rating allows the counselor to use his personal definition of case difficulty.

(2) Time and Effort Rating -- This rating asked the

counselor to indicate the total amount of time and effort actually given the sample cases. In the case of clients still in active status, the counselor was to project the amount of additional time and effort he planned to give the client.

(3) Severity of Handicap Rating -- The severity of handicap was defined as referring to limitations imposed on the client by his disability and his reaction to the disability. That is, the client's total complex of physical, emotional, mental, and vocational problems with which the client must cope, with or without the help of rehabilitation.

The relationship of the individual ratings to closure system should be noted. The difficulty rating is generally vague, and the definition of case difficulty is left up to the counselor. The time and effort rating is tied to the closure system in that it is not expected that the counselor will give considerable time and effort to a case after it is closed. The Severity of Handicap is independent of the closure system and specifically asks the counselor for ratings that reflect the problems with which the client must deal with or without the help of rehabilitation.

The development and use of Form A_1 as a criterion was based on (1) the need for a better criterion than the "26" closure, (2) the idea that the counselor involved in the client's rehabilitation is the best source of information about what is happening on his caseload, and (3) the development of the statistical technique for adjusting the correlations elaborated on in the analysis section of this chapter. This statistical technique allows the use of ratings with the counselor using clients on his own caseload as a frame of reference.

The next step was to decide when to have the counselor make the criterion ratings of his five clients. The decision to have minimum of six months between pretesting with the Services Outcome Measurement Form and the rating of the five sample clients with Form A_1 was a compromise. It allowed sufficient time for the counselor to gain experience working with the sample clients and yet conformed with restraints imposed by the project's schedule.

The counselor was asked to give the client's current status when completing the pretest SOM Form and the rating on Form A_1. Table 5.1 gives the comparison for the total sample between status at pretesting with the SOM Form and the status at rating with Form A_1.

Table 5.1 indicates all but 6% of the sample has moved through plan development (status 12) to in-service status (status 14-24) or closure (26, 28 or 30).

Sample

The sample for the field test of Services Outcome Measurement Form includes five clients for each of 364 counselors completing the pretest and the criterion ratings on their five clients. Table 5.2 gives a breakdown of the number of sample counselors and clients completing the study by state.

Of 485 initially selected counselors, 121 were dropped. Forty-seven counselors were dropped due to promotion, transfers, and extended illness, during the study. The remaining counselors were deleted due to incomplete or incorrect information. This second group includes counselors who did not accept five cases during the pretest data

Table 5.1

Comparison of Client Status at Pretest
With Service Outcome Measurement Form
And At Time of Counselors' Ratings With Form A1

	Pretest		Rating	
Status	No.	%	No.	%
10-12	1132	62	111	06
14-16	189	10	209	11
18	416	23	679	37
20-22	80	04	241	13
24	3	0	92	05
26	---	--	432	24
28	---	--	31	02
30	---	--	25	01
Total	1820	99[a]	1820	99[a]

[a] Not equal to 100 due to rounding of percentages.

collection period and those that did not return all forms

The sample includes a total of 1820 vocational rehabilitation clients composed of 957 males and 863 females, 1369 whites and 451 non-whites. Marital status of the sample was 578 married, 838 never married, 203 divorced, 122 separated and 79 widowed. The average age of the clients was 30.69. The primary disability (R-300 codes) breakdown for the sample was 349 visual impairments, 54 hearing impairments, 312 orthopedic deformity or functional impairments, 44 amputations, 532 psychological, 178 mental retarded, and 351 others. An extensive breakdown of the sample counselor and client characteristics is available in appendices C and E.

Analytic Procedures

The objectives of the statistical analyses are (1) to establish the correlation between the items and scores derived from SOM Form and the counselor ratings of Global Case Difficulty, Time and Effort, and Severity of Handicap, and (2) Examine the homogeneity of these relationships within the various client demographic subgroups. It is important to remember when addressing the second question,

Table 5.2

Breakdown of Sample

Counselors and Clients by States

States	No. of Counselors	No. of Clients	% of Sample
Maryland	70	350	19
Michigan	45	225	12
Oklahoma	69	345	19
Tennessee	69	345	19
Utah	60	300	16
Texas (Blind)	51	255	14
Total	364	1820	99

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[1] Total not equal to 100 due to rounding of percentages

that the concern is not with whether demographic subgroup A is more difficult, requires more effort, or is more severely handicapped than subgroup B, but rather is the relationship between the scores derived from the SOM Form and the criterion ratings the same for both subgroups.

The model for the correlation studies must permit the adjustment of the correlation coefficient for counselor differences due to divergent frames of reference when making the criterion ratings.

The procedure for calculating the adjusted correlation coefficient will be to remove the contribution of counselor differences from the total variation observed in the dependent variable (item) prior to the determination of the covariance between the two variables of interest. This adjustment may be made by means of analysis of covariance where the dependent variable is scale score, the covariate is the rating score, and the "treatment" is the counselor making the observations. From this analysis, the following formula for the counselor adjusted correlation may be evaluated.

$$r_a = \sqrt{\frac{\text{SS cov}}{\text{SS cov} + \text{SS error}}}$$

Where: r_a = adjusted correlation
SS cov = Sum of squares of the covariate (Score by rating)
SS error = Sum of squares of error

The homogenity of the relationship between scores and ratings across demographic subgroups is examined using an analysis of covariance where the dependent variable is the counselor's ratings and the independent variable or covariate is the score. The statistics of interest are the regression coefficients of the ratings on the scores. If the regression coefficients for the demographic subgroups are homogeneous, then the relationship between the ratings and scores are the same. The BMD X82 (Dixon, 1972) analysis of the covariance program was used to make these tests.

If the regression coefficients for the subgroups of a particular demographic variable were found to be heterogeneous ($p > .01$), then were grouped using Duncan's New Multiple Range Test. The rationale for this analysis was the independence and normality of the regression coefficients. A pooled estimate of the variance of regression coefficients was used in Duncan's Test. The pooled variance was estimated by:

$$\sqrt{MSE}\sqrt{\left[\frac{1}{\sum(X_j - \bar{X}_j)^2} - \frac{1}{\sum(X_i - \bar{X}_i)^2}\right]}^{1/2}$$

Where: MSE = Average Mean Square Error

All of the analyses were done on an IBM 370/158.

Chapter VI

RESULTS AND DISCUSSION OF FIELD TEST

The results of the statistical analysis of the field test will be presented in three parts. The first part is a correlation study and gives information about the overall strength of the relationship between the scores derived from the Service Outcome Measurement (SOM) Form and the counselor's ratings of Global Case Difficulty, Time and Effort, and Severity of the Client's Handicap. The second and third parts of the statistical analysis investigated the stability of the relationships between Area and Factor Scores[1] and the criterion ratings across selected demographic subgroups. Where significant differences ($p > .01$) in subgroup regression coefficients occurred, Duncan's New Multiple Range Test was performed to identify the subgroups that could be collapsed into homogeneous subsets. The results of the range tests are included in Appendix D and the discussion is confined to major subsets.

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[1] Factor scores were determined by averaging those items with heavy loadings on the factor as given in Chapter 4, page 54.

Correlation Study

The results of the correlation studies between SOM scores and counselor's ratings are presented in Table 6.1. These correlations are adjusted for counselor differences as outlined in Chapter V. Each of these correlations is significant at the .01 level with the exception of Vocational Level and Prominence of Handicap with Time and Effort ratings. Table 6.2 contains the counselor adjusted correlations of the factor scores, with the criterion ratings. All of these correlations are significant beyond the .01 level ($r \geq .081$).

The total score for the instrument was the sum of the average area scores for Areas I, III, IV, V, and VI. Area II was excluded since it did not use rating scales. The adjusted correlation of the total score for the original SOM Form was .39 with Case Difficulty, .28 with Time and Effort, and .41 with Severity of Handicap. Very little is gained by using multiple correlations. The multiple correlation of the five area scores was .39 with Case Difficulty ratings, .29 with Time and Effort ratings and .46 with Severity of Handicap ratings.

The correlation of the factor scores with the criterion

Table 6.1

Adjusted Correlations of Scale, Area and Total Scores With Counselors Ratings of Global Difficulty, Time and Effort, and Severity of Handicap

		Adjusted Correlations		
le or Area		Difficulty	TE	Severity
A.	Anticipated Change	.18	.08	.20
B.	Employment Prognosis	.22	.16	.24
C.	Work History	.23	.17	.19
D.	Availability of Facilities	.16	.14	.19
E.	Availability of Transportation	.20	.17	.23
erage	Area I Score	.32	.24	.34
I A.	Vocational Level	.09	.06[b]	.09
I B.	Weekly Earnings	.18	.14	.15
I C.	Work Status	.24	.16	.21
I D.	Primary Source of Support	.15	.13	.15
I E.	Financial Dependency	.17	.13	.15
erage	Area III Score	.22	.16	.19
A.	General Health Status	.17	.14	.21
B.	Mobility	.19	.15	.30
C.	Physical Independence	.20	.14	.30
D.	Work Tolerance	.19	.13	.29
E.	Prominence of Handicap	.11	.07[c]	.24
F.	Compensatory Skills	.21	.16	.22
erage	Area IV Score	.27	.20	.41
A.	Identification w/Worker Role	.23	.14	.21
B.	Employment Expectations	.27	.19	.25
C.	Confidence as Worker	.25	.15	.26
erage	Area V Score	.31	.19	.30
A.	Language Facility	.18	.11	.20
B.	Decision-Making Ability	.24	.17	.25
C.	Role in Family	.26	.20	.24
D.	Family Support	.18	.15	.13
erage	Area VI Score	.30	.22	.29
tal Score		.39	.28	.41

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ll correlations except the two noted exceptions significant t .01 level (r ≥ .08)

ot significant

ignificant at .05 level

ratings indicates very little is lost due to the deletion of items which had weak loadings on the factor analysis.

Table 6.2

Adjusted Correlations of Factor Scores
With Counselors' Ratings of Global Difficulty,
Time and Effort, and Severity of Handicap

Factor		Adjusted Correlations Difficulty	TE	Severity
I	Economic/Vocational	.21	.16	.19
II	Physical Functioning	.23	.16	.39
III	Psychosocial	.32	.21	.31
IV	Family Relationships	.25	.20	.21
V	Education	.14	.09	.16
Factor Total Score		.37	.27	.39

The correlation for the factor total score (sum of individual factor scores) was .37 with Case Difficulty ratings, .27 with Time and Effort ratings and .39 with Severity of Handicap ratings. As with area scores, little is gained by the use of multiple correlation. The multiple correlation of the factors with the criterion ratings was .38 with Case Difficulty, .27 with Time and Effort, and .45 with Severity of Handicap.

The correlation among the counselor's ratings was .73 for Case Difficulty with Time and Effort, .70 for Case Difficulty with Severity of Handicap, and .62 for Severity of Handicap with Time and Effort.

The highly significant correlations between SOM Scores and the three counselor ratings as well as the highly significant correlations between factor scores and counselor ratings provides substantial evidence for the validity of Services Outcome Measurement Form.

All of these correlations were adjusted for counselor differences. To establish the necessity for this adjustment for further analysis, area, factor, and total scores were correlated with the counselor ratings by the standard product-moment formula. These results were then compared using Fisher's Z test for homogeneity of correlations coefficients (Snedecor and Cochran, 1970). The results are given in Appendix D. Of the thirty-six analyses, only four cases had significant differences between the adjusted and unadjusted correlations. The discrepency between adjusted and unadjusted correlations occurred when Physical Functioning was correlated with the counselors' ratings of Severity of Handicap. This also reflected in the Total

Score correlation with Severity of Handicap. Due to the correspondence of adjusted and unadjusted correlations and the difficulty of making the adjustments, subsequent analyses were not adjusted for counselor differences.

Stability of Original Area Scores

The stability of the relationship between the criterion ratings and the original area and total scores was examined across subgroups of selected demographic variables. These variables were: (1) States, (2) Primary Disability, (3) Race, (4) Sex, (5) Age, (6) Referral Source, (7) Marital Status, and (8) Previous Agency Contact.

Of the 144 tests for the homogeneity of the subgroup regression coefficients, ten proved significant at the .01 level (See Table 6.3). No significant differences for any criterion were found when the data was grouped by states, race, sex, referral source, or previous agency contact. All ten significant differences occurred when the data was divided into subgroups by primary disability, age, and marital status.

Table 6.3 indicates that the relationship of Area I (Difficulty) with all three criterion ratings, Area V

Table 6.3

Results of F-Tests for the Homogeneity of Demographic Subgroup Regression Coefficients for Original Area Scores

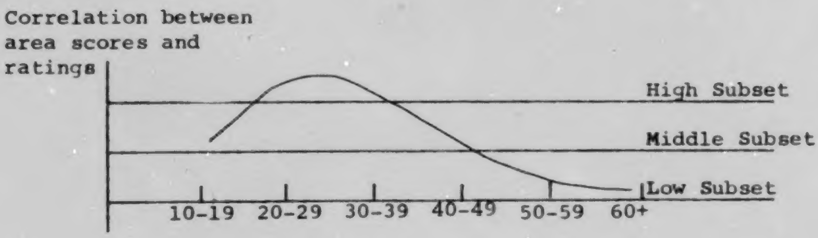
		Status	Primary Disability	Race	Sex	Age	Referral Source	Marital Status	Previous Agency Contact
Dependent Variable is Global Difficulty									
Area I	Difficulty	0.62	0.68	0.86	0.38	4.75[a]	1.12	2.44	1.27
Area III	Econ/Vocational	0.80	2.39	1.70	1.02	0.56	0.83	2.10	1.57
Area IV	Physical Functioning	1.12	1.12	4.33	0.44	2.49	1.82	1.28	1.61
Area V	Adjustment to Disability	1.86	0.69	0.50	0.29	4.64[a]	0.39	0.55	1.30
Area VI	Social Competency	1.29	1.92	0.15	0.14	2.79	0.46	0.25	2.91
Total Score		1.39	1.21	0.04	0.62	3.26[a]	0.99	1.27	0.41
Dependent Variable is Time and Effort									
Area I	Difficulty	0.56	0.61	0.61	0.90	3.15[a]	0.93	2.37	0.08
Area III	Econ/Vocational	1.36	2.76	1.05	0.76	0.77	0.29	1.13	1.34
Area IV	Physical Functioning	1.44	1.11	2.99	0.55	2.68	1.70	1.41	3.03
Area V	Adjustment to Disability	0.37	2.18	0.46	0.05	3.25[a]	1.67	2.82	0.00
Area VI	Social Competency	0.55	2.23	0.91	0.00	2.43	1.15	1.33	0.60
Total Score		0.86	2.01	0.10	0.30	2.95	0.98	1.99	0.03
Dependent Variable is Severity of Handicap									
Area I	Difficulty	0.63	0.75	1.17	0.15	3.51[a]	0.32	2.68	2.58
Area III	Econ/Vocational	1.16	2.96[a]	0.39	0.00	1.88	0.13	5.22[a]	0.48
Area IV	Physical Functioning	1.31	0.73	4.45	0.00	1.11	1.47	3.69[a]	0.02
Area V	Adjustment to Disability	0.97	1.02	0.85	0.00	2.69	0.49	2.51	0.83
Area VI	Social Competency	0.63	0.51	2.19	0.84	1.58	1.00	1.96	4.37
Total Score		0.30	0.81	1.24	0.43	2.91	0.64	5.02[a]	0.78
F value at .01 level		3.02	2.80	6.63	6.63	3.02	3.32	3.32	6.63

[a] Significant at .01 Level

(Adjustment to Disability) with the Case Difficulty and Time and Effort ratings and the total score with the Case Difficulty ratings are affected by age subgroupings.

Duncan's New Multiple Range Test (see Appendix D) indicates that the age subgroups tend to follow a pattern regardless of whether the dependent variable is the Case Difficulty, Time and Effort or Severity of Handicap rating. The subset that has the consistently highest relationship between the scores and criterion ratings is the 20-39 year old subgroups; lowest is the over 50 subgroups and a middle subset composed of 10-19 and 40-49 year old subgroups. These relationships are diagramed in Figure 6.1.

Figure 6.1



It should be noted the relationships described are a trend that emerged in the six range tests, and there is also overlap between the subsets.

Table 6.3 also indicates that the relationship between Area I, and Area VI and total score with the Severity of Handicap ratings are affected by the marital status of the client. Examination of Duncan's Multiple Range Test reported in Appendix D indicates that the never married, married and divorced clients are essentially the same in association of area scores and Severity of Handicap ratings. Although the fundamental relationship is the same, the strength of the relationship between the total score and the Severity of Handicap ratings is weakest when used to establish Severity of Handicap in maritally separated clients. The instability of the marital and family relationships of separated clients appears to temporarily override serious concern with economic and physical functioning. It should be noted, however, that this is a transient state, as divorced clients are included in the homogeneous subset with married and never married clients.

A significant difference was also found between clients with psychological disabilities (R-300 codes 500-529) and all other types of disabilities in the relationship of Area III (Economic/Vocational) and Severity of Handicap. Although, in all disability subgroups (Economic/Vocational Functioning decreases as Severity of Handicap increases, that affect is less apparent in clients with psychological disabilities. However, this instability does not affect the total score, as the total score remains stable regardless of disability subgroups.

The scores for the original area scores proved to be quite stable. Only in the cases of (1) age subgroups and the Global Case Difficulty rating and (2) marital status subgroups and Severity of Handicap ratings, were the total scores affected by breaking the data down into demographic subgroups. The results of the analysis for age groups are interesting in light of the previously contradictory findings regarding the relationship of age and rehabilitation outcome variables.

Stability of Factor Scores

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Of the 144 individual F-Tests for homogeneity of the demographic subgroup regression coefficients between the factor scores and the counselors' ratings, eleven proved to be significant at the .01 level. As with the original area scores, all significant differences in subgroup regression coefficients occur when the data was divided into groups by age, primary disability, and marital status. The results of the F-Tests for all demographic groups are given in Table 6.4.

As Table 6.4 indicates, six of the eleven differences that proved to be significant occurred when Factor Score V (Education) was the independent variable. Only when marital status groups were considered and the dependent variable was Severity of Handicap, did the subgroup regression coefficients differ significantly for the Factor Total Score. Duncan's Multiple Range Test for marital status groups indicates that the separated and widowed clients compose a subset where the regression coefficients, while still positive, are significantly lower than the subgroup containing married, divorced, and never married clients. The disparity observed among separated and widowed clients is consistent with that observed earlier with the original area scores.

The significant differences among age subgroup regression coefficients occurred for Factor Score V (Education) in relation to all three criterion ratings.

Table 6.4

Results of F-Test for Homogeneity of Demographic Subgroup Regression Coefficients for Factor Scores

		States	Primary Disability	Race	Sex	Age	Referral Source	Marital Status	Previous Agency Contact
Dependent Variable is Global Difficulty									
Factor I	Econ/Vocational	0.85	2.58	1.67	0.94	0.67	0.69	1.71	1.63
Factor II	Physical Functioning	1.22	0.82	3.13	0.06	1.46	2.54	0.93	3.20
Factor III	Psychosocial	2.58	0.68	0.43	0.43	4.84[a]	0.30	0.28	2.82
Factor IV	Family Relationships	1.57	2.36	0.28	0.93	1.43	0.92	1.21	3.65
Factor V	Education	0.76	2.33	0.42	5.42	4.79[a]	2.85	4.23[a]	1.07
Factor Total Score		1.27	1.51	0.00	0.65	2.06	1.06	1.31	0.45
Dependent Variable is Time and Effort									
Factor I	Econ/Vocational	1.68	3.15[a]	1.71	0.38	0.72	0.18	0.83	1.87
Factor II	Physical Functioning	1.31	0.52	2.21	0.07	1.71	2.33	0.65	4.98
Factor III	Psychosocial	0.43	1.98	0.25	0.08	2.76	1.42	2.57	0.30
Factor IV	Family Relationships	1.43	2.02	0.00	1.08	1.60	1.11	1.36	3.57
Factor V	Education	0.99	2.19	3.74	4.62	3.54[a]	3.27	2.69	6.44
Factor Total Score		0.92	2.50	0.18	0.33	2.52	0.94	1.84	0.00
Dependent Variable is Severity of Handicap									
Factor I	Econ/Vocational	1.22	3.23[a]	0.53	0.01	1.67	0.07	4.39[a]	0.20
Factor II	Physical Functioning	1.74	1.05	1.66	0.63	0.92	1.97	2.17	0.07
Factor III	Psychosocial	1.61	0.61	0.62	0.02	2.29	0.93	2.33	2.13
Factor IV	Family Relationships	0.43	1.33	0.62	2.91	2.85	1.11	1.74	3.74
Factor V	Education	0.13	3.22[a]	1.12	0.95	5.08[a]	1.80	5.21[a]	0.57
Factor Total Score		0.38	0.94	0.73	0.86	2.38	0.53	5.06[a]	1.36
F value at .01 level		3.02	2.80	6.63	6.63	3.02	3.32	3.32	6.63

[a] Significant at .01 Level

The relationship between the educational factor and all three criterion ratings were strongest for the 10-29 year olds who composed 59% of the sample clients. The over 30 year old clients grouped together when the dependent variable was Time and Effort, and Severity of Handicap; however, when the Case Difficulty ratings were the dependent variable, three overlapping groups emerged. The three homogeneous subsets in the latter analysis were (1) 10-29, 40-49, 60 and above and (2) 10-19, 40 and above and (3) 30-39, 50 and above. The only other factor score where significant differences occurred among age subgroups was Factor Score III (Psychosocial) when the dependent variable was the Case Difficulty rating; the homogeneous subsets in this analysis were (1) 20-49, (2) 30-49 and 10-19, and (3) 10-19 and over 50.

Again, in the same manner as the original area scores, psychological disabilities separated from all other disabilities by having a weaker relationship between Economic/Vocational items (Factor I) and Severity of Handicap. However, for the factor scores this situation is repeated when Time and Effort is the dependent variable in the analysis. The relationship of Factor V (Education) to

Severity of Handicap ratings is also significantly different for disability subgroups. In this instance subsets overlap with the highest subgroup regression coefficient being mental retarded clients (R-300 codes 530's) and the lowest for others (R-300 codes 600's) with all other disability classifications forming a subgroup in the Middle.

The factor scores proved to be quite stable over the eight demographic groupings. The most instable factor score was the Educational Factor V, however, only once (Marital status subgroups) was there a significant difference in the subgroup regression coefficients for the factor total score. The factor scores compare quite favorably to the original area scores in the stability analysis.

Both the original area scores and the shortened factor scores have been shown to have a strong and stable relationship to the counselors' ratings of Global Case Difficulty, Time and Effort, and Severity of Handicap. In fact, very little if any is lost by reducing the SOM Form from the original form with twenty-three items to the sixteen item version derived from the factor analysis described in Chapter IV.

Chapter VII

SUMMARY

The purpose and objectives of Service Outcome Measurement Project as stated in the original project application was to:

1) Development of a procedure for measuring the changes in client's social, physical, emotional and vocational functioning.

2) Development of a procedure for determining the relative difficulty of different cases.

These broad initial purposes were narrowed, discussed and made specific with the help of the States Advisory Committee and Oklahoma counselors and administrators. From the many discussions came several criteria which an administratively feasible measure of case difficulty and client change should meet. In general, these were:

1) Change should be measured for all clients regardless of closure status.

2) The measure should require no changes in the service delivery system.

3) The measure should not require sophisticated

electronic data processing equipment.

4) The measure should be easily interpreted.

5) The measure should require little in-service training.

6) The measure should not require more than ten minutes of the counselor's time per case.

7) The measure should yield reliable information when used across agencies, programs and counselors.

8) The content of the measure should reflect the real world concerns and goals of vocational rehabilitation.

To meet these criteria, the project staff developed Form A, later termed Service Outcome Measurement Form. After revisions based on comments and recommendations of the States Advisory Committee, Liaison Personnel and Oklahoma Rehabilitative Services Personnel, it was decided that the instrument was ready to be tested. That is, the Service Outcome Measurement (SOM) Form appeared capable of meeting the administrative criteria, and the reliability and validity needed to be tested.

The reliability study utilized five counselors each from New Mexico, Texas, and Colorado. The results of the reliability study indicated that the use of carefully anchored rating scales can provide a method for measuring client status or change. The pooled reliability coefficient for the total score was .93 for the fifteen counselors. Regardless of the value of any particular scale for the measurement of case difficulty or client change, this part of the study indicated that carefully anchored rating scales could be made sufficiently reliable for use among different counselors and agencies.

The factor analysis of the SOM form resulted in the identification of five factors that correspond to the original intent of the form. The five factors have been labeled: (1) Economic/Vocational Functioning, (2) Physical Functioning, (3) Psychosocial Functioning, (4) Family Relationships, and (5) Educational Functioning. These factors utilized only 16 scales and were compared to the original SOM Form (23 scales) in terms of the strength and stability of their relationship to the counselor's ratings of case difficulty, time and effort, and severity of handicap made six months after the pretest. The correlations between the scores obtained from Service Outcome Measurement Form and the counselor's ratings were adjusted for differences between counselors by deriving the correlations from an analysis of covariance.

Substantial correlations were found for the area, factor and total scores and little was lost by using the shorter factor version (see Table 7.1). In addition, very little was gained by using multiple correlations. In view of the strength of the total score correlations, Service Outcome Measurement Form would seem very practical for agencies without sophisticated data processing equipment.

Demographic items had weaker and less stable relationships to the criterion ratings. Weekly earnings at acceptance was the only demographic variable that had a significant relationship to all three criterion ratings. A multiple correlation was computed for the items of demographic data that had correlations significant at the .05 level ($r \geq .062$) with the counselor's ratings. This gave a multiple correlation of .19 for weekly earnings at acceptance and sex with Case Difficulty Ratings. Weekly earnings at acceptance, number of disabilities, and months of trade or vocational school had a multiple correlation of .17 with the counselor ratings of Time and Effort. Age, Sex, Previous Agency Contact, Weekly Earnings, Number of Disabilities, and Years of Academic Education had a multiple correlation of .22 with ratings of Severity of Handicap.

In addition to the overall correlations, the stability of the various SOM Scores in their relationship to the criterion ratings was also analyzed. The stability analysis was done by dividing the data into demographic subgroups and using an F-Test for the equality of subgroup regression coefficients derived from an analysis of covariance. The eight demographic groups selected for analysis were states, primary disability, race, sex, age, referral source, marital status, and previous agency contact. If there were a significant difference among the subgroup regression coefficients for a SOM Score, Duncan's New Multiple Range test was performed to combine the subgroups into homogeneous subsets. Of 144 individual F-Tests using the area and total scores of the original form as the independent variable, only ten proved to be significant at the .01 level. No significant differences were found when the data was divided into subgroups by

Table 7.1

Adjusted Correlations of Area, Factor, and Total Scores With Counselor Ratings of Global Difficulty, Time and Effort, and Severity of Handicap[a]

ea		Difficulty	TE	Severity
I	Difficulty	.32	.24	.34
I	Economic/Vocational	.22	.16	.19
V	Physical Functioning	.27	.20	.41
V	Adjustment to Disability	.31	.19	.30
I	Social Competency	.30	.22	.29
	Total Score (Σ of Area Score)	.39	.28	.41
ctor				
I	Economic/Vocational	.21	.16	.19
I	Physical Functioning	.23	.16	.39
I	Psychosocial	.32	.21	.31
V	Family Relationships	.25	.20	.21
V	Education	.14	.09	.16
	Total Score (Σ of Factor Score)	.37	.27	.39
	Multiple R for Area Scores	.39	.29	.46
	Multiple R for Factor Scores	.38	.27	.45

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[a] All correlation significant beyond the .01 level ($r \geq .081$)

states, race, sex, referral source, or previous agency contact. All ten significant differences occurred when the data was divided into subgroups by primary disability, age, and marital status. Twice there was a significant difference in the regression coefficient when the total score was the independent variable. The first occurred in age subgroups with the Global Difficulty Rating as the dependent variable. One large homogeneous subset of age subgroups represented ages 10-49. The second significant difference for the total score occurred in marital status subgroups when the dependent variable was Severity of the Handicap. In this case, separated and widowed clients formed a subset separate from married, never married and divorced clients.

Factor scores were also investigated for stability. Again, 144 separate F-Tests for the equality of subgroup regression coefficients were performed and the demographic groups were the same as studied for the original area scores. Eleven of the F-Tests using factor scores as the independent variable were significant at the .01 level. Again, no significant differences in the subgroup regression coefficients were found when the data was divided in subgroups by states, race, sex, referral source, or previous agency contact. As with the original area scores, all significant differences occurred when the data was divided into subgroups by primary disability, age, and marital status. The only time the factor total score was significant at the .01 level was when the dependent variable was severity of the client's handicap and the data was divided into marital status subgroups. Again, as with the original area scores, the widowed and separated clients formed a homogeneous subset while never married, married, and divorced clients formed another homogeneous subset.

The outlook for the use of these or a similar set of rating scales seem quite good. The Service Outcome Measurement Form has demonstrated (1) good reliability, (2) solid internal structure, and (3) a substantial and stable relationship to counselor ratings of Global Case Difficulty, Time and Effort, and the Severity of Client's Handicap, while at the same time, staying with the confines of administrative necessity. Further testing is currently underway to investigate the Service Outcome Measurement Form as a measure of client change in a pretest-posttest design.

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APPENDIX A

STATE ADVISORY COMMITTEE
TO SERVICE OUTCOME MEASUREMENT PROJECT

STATE LIAISON PERSONNEL

APPENDIX A

STATE ADVISORY COMMITTEE
TO SERVICE OUTCOME MEASUREMENT PROJECT

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SERVICE OUTCOME MEASUREMENT PROJECT

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APPENDIX B

Project Forms

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INTRODUCTION

This appendix contains the material sent to the counselor in this study. The different forms are presented in the order mailed to the counselor minus any redundant material. The first material the counselor received was the cover letter sent by the counselor's state agency notifying him of his participation in the project and requesting his cooperation. This letter varied for each state involved in the project. With the cover letter was sent an "overview of the Project" and a Form C, Counselor/Caseload Characteristics Form. An example of the cover letter used in Oklahoma is given on page B-3. Next the counselor was sent the training packet and following the training packet was the research packet. As the research forms came in, the project staff checked the forms and returned them to the counselors for correction if needed. In this matter the liaison personnel were essential to the data collection effort. Six months after receiving the Form A (Service Outcome Measurement Form) on the counselor's last client the Difficulty Rating Form (A_1) was mailed to the counselor.

STATE OF OKLAHOMA
OKLAHOMA PUBLIC WELFARE COMMISSION

DEPARTMENT OF INSTITUTIONS, SOCIAL AND REHABILITATIVE SERVICES
(Department of Public Welfare)

L. E. Rader
Director of Institutions,
Social and Rehabilitative Services

Mailing Address: P.O. Box 25352

Sequoyah Memorial Office Building
OKLAHOMA CITY, OKLAHOMA - 73125

In Reply - Address to Director
Attention

May 1, 1972

Dear Counselor:

I am sure that you, as a rehabilitation counselor, are aware of the need for more adequate measurement of the quality of services we provide our clients. This is a topic which inevitably comes up in all professional counselor meetings. After many years of informal concern with and discussion of this problem, RSA has given our agency the major responsibility for developing adequate and equitable measurement techniques other than the traditional number of "26" closures.

Mr. Green has asked that I inform you of your selection as a participating counselor in the Service Outcome Measurement Project. As such, you will be the basic source of data for the project and the results will depend upon your cooperation and support. In view of the importance and magnitude of the project, the personal effort and support of every participating counselor will be required. However, the long-term benefits of the project obviously outweigh the short-term increase in your workload.

There are two enclosures with this letter. First, there is a brief project description, "An Overview of the Project," designed to acquaint you with the full scope of the project. Second, there is a form, "Form C:Counselor/Caseload Characteristics," which is designed to provide some base line data for the project. Please complete Form C prior to May 15, 1972, and return it to Mr. Lowell Lenhart, Technical Director, Rehabilitative Services Unit, RS #24, Oklahoma City, Oklahoma.

I would like to thank you, in advance, for your participation in this project and urge you to give it the high priority it deserves. If you have any questions regarding the project, please do not hesitate to contact Mr. Lenhart.

Very truly yours,

L. E. Rader, Director of Institutions,
Social and Rehabilitative Services

Enclosures
cc: Area Coordinators
    Area Supervisors

SERVICE OUTCOME MEASUREMENT PROJECT

An Overview of the Project

Background

Although recent legislation expanding the scope of the rehabilitation enterprise has given rise to many new and unforeseen problems, there continues to exist one old, but increasingly important, issue which has plagued rehabilitation counselors and administrators alike from the very beginnings of the rehabilitation movement. Quality of services rendered has been measured, traditionally, solely on the basis of the number of persons successfully rehabilitated. Seemingly, rehabilitation counselors have always been aware of the shortcomings of this procedure. Harold Viaille has summarized these limitations as follows: (1) it tends to emphasize numbers rather than the quality of services; (2) it may tend to emphasize relatively non-complex cases requiring little counselor time; (3) it may encourage closing a client's case before it it ready to close in order to meet a quota; (4) it may encourage keeping a client on the caseload longer than should be in order to assure meeting next year's quota; (5) it makes it difficult to obtain an even flow of work throughout the year; (6) it is a difficult procedure to apply in areas of specialized counselors; and (7) it does not allow credit to the counselor for the amount of work expended on cases closed nonrehabilitated.

Awareness of the problems attendant to this approach to accountability was broadened considerably with the publication of the 1968 Report of the National Citizen's Advisory Committee on Vocational Rehabilitation. This committee was very critical of the "numbers game" and recommended strongly that procedures be implemented to devise suitable alternatives for measuring the effectiveness of services. As an indication of the current emphasis being given to measurement more accurately reflective of the rehabilitation process, the following statement is quoted from the Report of The House Committee on Education and Labor, which accompanied H.R. 8395 (Rehabilitation Amendments of 1972):

> In the future, the Committee will include in its measure of the performance of the Rehabilitation Services Administration the degree to which it comes to grips with the multiple problems of the handicapped. The Committee will ask not solely how many persons were processed, served and rehabilitated, but also how difficult was the task and how much change was effected in each individual client.

Purpose of the Project

The purpose of this project, quite simply, is to develop a measure which will reflect the quality of services rendered during the rehabilitation process. The primary focus, within this context, is upon the two concepts which are perhaps most integral to such measurement: (1) case difficulty and (2) client change. These two concepts will be examined as they relate specifically to the following five areas of client functioning: physical, educational, economic, vocational, and psychosocial.

Instrumentation

Inasmuch as an extensive review of previous work relevant to this problem revealed very little material appropriate to the needs of the project, it has been necessary to specially design project instrumentation. Two approaches to the measurement of service outcome have been considered and an instrument developed for each. The two instruments have been designated as Form A and Form B.

Form A: This approach attempts to establish the client's level of functioning at any given point in time. It asks, essentially, "Where does the client stand, at this point in time, regarding these areas of functioning?" Level of functioning, particularly on certain items, is expected to reflect case difficulty. Measurement at two points in time will reveal the changes made by the client in the areas measured.

Form B: This approach conceptualizes rehabilitation as a process wherein a counselor works with a client in an attempt to reduce or eliminate specific problems which interfere with his optimal employment. This form is designed to be completed one time, at closure, and to summarize (1) the number, and (2) the severity of the problems presented by the client, (3) the amount of time and effort given each problem by the counselor, and (4) the client's progress in overcoming each problem.

Research Design

Five separate studies have been designed to evaluate the two instruments under consideration. These studies will involve twelve state agencies, approximately 900 counselors, over 8,000 clients, and some 20,000 measurements, thus making this project one of the most ambitious ever attempted in the field of rehabilitation.

Study I: Both forms will be tested for reliability by means of asking five counselors from each of three states (Texas, New Mexico, and Colorado) to complete each form ten times using ten separate case histories prepared in comprehensive narrative format. Consistency of ratings will be evaluated by percentages and correlations.

Study II: Up to eighty counselors from each of six states (Maryland, Michigan, Oklahoma, Tennessee, Texas Blind), and Utah) will be asked to complete Form A twice on each of five clients, once at acceptance and once at either closure or 12 months. Scores obtained on Form A will be compared (1) with counselor rankings of case difficulty obtained six months after acceptance and (2) with counselor rankings of client change obtained after the second measurement is complete. The correlation of scores and rankings will be considered an index of validity.

Study III: This study involves the use of Form A to evaluate all Oklahoma clients who have been in "accepted" status for one year, two years, or three years, plus or minus one month (approximately 4,000 clients). These clients will be evaluated again at closure or 12 months, allowing prediction tables to be established relative to case difficulty and client change.

Study IV: Up to eighty counselors from each of six states (Arkansas, Delaware, Michigan, Oklahoma, Oregon, Texas Blind) will be asked to complete Form B on each of five clients closed in status 26, 28, or 30. Measurements obtained on the form will be compared with counselor rankings of the cases by severity, emphasis, and progress to give an index of validity.

Study V: Cross validation of Form A and Form B will involve asking Tennessee and Maryland counselors to complete Form B on those clients for whom Form A measurements are already available from Study II, making it possible to compare the measurements of the two forms from the same client groups.

SERVICE OUTCOME MEASUREMENT PROJECT

COUNSLER CASELOAD CHARACTERISTICS
RESEARCH REPORT FORM C

Counsler Name .... Mailing Address (Include Zip Code) ....

1. ________ STATE AGENCY NO. 2. ________ COUNSELOR NO. 3. ________ AGE 4. ________ SEX (M=1 F=2)

2. ________ RACE (White=1, Negro=2, Indian=3, L. Am.=4, Others=5) 6. ________ MARITIAL STATUS Married=1, Wid.=2, Div.=3, Sep.=4, Never Married=5

EDUCATION

7A. ________ HIGHEST DEGREE (H.S.=1, AA=2, Bachelor=3, Masters=4, Doctors=5, Other=6) (If other specify) ....

B. ________ UNDERGRADUATE MAJOR C. ________ GRADUATE MAJOR
(Theology=1, Education=2, Psychology=3, Sociology=4, Business=5, Philosophy=6, Social Work=7, Other=8, Not Applicable=9)
If other, specify Under .... Grad ....

D. ________ SPONSORED BY REHABILITATION COUNSELOR TRAINING PROGRAM (Yes=1, No=0)

8A ________ PREVIOUS OCCUPATIONS ________ Years in each
B ________ ________
C ________ ________
D ________ ________

(Business=1, Sales=2, Agriculture=3, Teaching, Gen.=4, Teaching, Coaching=5, Clerical=6, Administration=7, Ministry=8, Psychology=9, Research=10, Social Work=11, Other=12, None=13)
If other(12) specify ....

9. ________ NUMBER MONTHS EMPLOYED AS A REHABILITATION COUNSELOR

10. ________ NUMBER MONTHS EMPLOYED IN OTHER REHABILITATION CAPACITIES

11. ________ HAVE YOU EVER BEEN A CLIENT OF A VOC. REHAB. AGENCY? (Yes=1, No=0)

12. ________ TYPE OF CASELOAD (General=1, Specialized=2).

13. ________ IF SPECIALIZED, (By Disability=1, By Facility=2).

14. ________ IF SPECIALIZED BY DISIBILITY, PRIMARY DISIBILITY SERVED (Use disibility code).

15. ________ IF SPECIALIZED BY FACILITY, TYPE OF FACILITY (Workshop=1, Rehab. Center=2, Corrections=3, Special Project=4 Specify ....
Other=5 Specify ....

16. ________ AVG. NO. CASES ACCEPTED MONTHLY 17. ________ AVG. NO. STATUS 26 CLOSURES MONTHLY

18. ________ CURRENT NO. CASES IN 00-06 STATUS 19. ________ CURRENT NO. OF CASES IN 10-24 STATUS

20. ________ HOW WOULD YOU CHARACTERIZE YOUR CASELOAD (Urban=1, More urban than rural=2, more rural than urban=3, or rural=4).

21. ________ ARE THERE ANY SEASONAL VARIATIONS IN THE CHARACTERISTICS OF THE CASES YOU EXPECT TO ACCEPT OR CLOSE BETWEEN JULY AND OCT. OF THIS YEAR? (Yes=1, No=0)
EXPLAIN ....

22. ________ DO YOU ANTICIPATE BEING AWAY FROM YOUR CASELOAD FOR ANY SIGNIFICANT PERIOD OF TIME WITHIN THE NEXT 12 MONTHS? (Yes=1, No=0).
EXPLAIN ....

NOTE: Use the appropriate code if defined in parenthesis following the data item.

Service Outcome Measurement Project

Instructions for Training Cases

As a participating counselor for the Service Outcome Measurement Project, you will be asked to complete **Form A and/or Form B on a certain number of cases. Special instructions for your participation in the project will follow in about two weeks. In preparation for your participation, however, we ask that you follow the instructions below.

Prior to using the form(s) in giving actual research data, it is necessary that you gain some experience with and knowledge of the type of information requested on the form(s). Consequently, we are providing you with this training packet. Enclosed you will find two (2) copies of the form (or forms if you are to use both Form A and Form B) and a case narrative. Please follow, in exact order, the steps given below.

1. Read thoroughly all instructions supplied with the form(s).
2. Study the form(s).
3. Select one case from your caseload which is fairly close to closure and about which you know a great deal; complete the form(s) on this case.
4. Read the case narrative thoroughly; complete the form(s) on this case. Do this only after you have completed step 3.
5. Send the form you filled out on the case narrative (step 4) to:

Mr. Lowell Lenhart, Technical Director
Rehabilitative Services Unit
Department of Institutions, Social
and Rehabilitative Services
P.O. Box 25352
Oklahoma City, Oklahoma 73125

The purpose of the above procedure is threefold: First, it will allow you to become thoroughly familiar with the form(s) you will be using. Second, it will allow us to check the lines of communication we have set up for controlling the large influx of data we anticipate. Third, it will allow us to obtain an estimate of how consistently different counselors complete the form using the same information.

We would like to take this opportunity to welcome you as a part of the research team. Having read the description of the purposes and procedures of the project supplied you earlier, we are sure that you are aware of the importance of the project and the great benefits which can be derived both for you and your clients if we are successful. Your efforts toward making it a success are deeply appreciated.

**Counselors in Utah, Maryland, and Tennessee will be using Form A; Counselors in Oregon, Delaware, and Arkansas will be using Form B; Counselors in Michigan, Texas (Blind), and Oklahoma will be using either or both of the forms. If only one of the forms is in your packet, you may assume that it is the only one you will be using; if both forms are in the packet, you will know that you are scheduled to use both types of forms.

RESEARCH REPORT FORM A

Counselor ____________________ Client ____________________ Date ____________

1. ____________________ State Agency Number
2. ____________________ Case Number
3. ____________________ Caseload Number
4. *________ Status
5. *________ Reason for Closure (Only if Other than Status 26)
6. ________ Age
7. ________ Race (1 White, 2 Negro, 3 Indian, 4 Latin American, 5 Other)
8. ________ Sex (1 Male, 2 Female)
9. *________ Referral Source
10. ________ Age Started Working
11. ________ Previous Agency Contact (1 Yes, 2 No)
12. ________ Marital Status (1 Married, 2 Widowed, 3 Divorced, 4 Separated, 5 Nev. Married)
13. ________ No. of Dependents
14. ________ Age at Disablement
15. *________ Primary Disability
16. *________ Secondary Disability
17. ________ No. of Other Documented Disabilities
18. $________ Weekly Earnings (Dollars Only)

(*Use R-300 Codes, Oklahoma use R-105 Codes, Maryland use R-13 Codes, Utah use ORS-300 Codes)

I. DIFFICULTY ONLY

A. Anticipated Change in Client's Level of Functioning During Services

________ 1. Alleviate
________ 2. Improve Greatly
________ 3. Improve Somewhat
________ 4. Remain the Same
________ 5. Deteriorate

B. Employment Prognosis

________ 1. Presently employed in competitive labor market and will continue on same job or higher job
________ 2. Employable at former job or another job without training
________ 3. Vocational training required, client has training potential
________ 4. Limited vocational training potential
________ 5. No vocational training potential

C. Employment History, To An Employer, the Client's Past Work History Would

________ 1. Make a very favorable impression
________ 2. Make a favorable impression
________ 3. Seems adequate
________ 4. Seems inadequate, but acceptable with reservations
________ 5. Extremely bad employment history

D. Availability of Facilities and Client's Attitude Toward Temporary Relocation (Minimum of three weeks)

________ 1. All necessary facilities are available or client looks forward to temporary relocation
________ 2. Client accepts temporary relocation and adjustment problems will be relatively few or will not be severe or client resists using available facilities
________ 3. Client accepts temporary relocation but may have difficulty adjusting to his new surroundings
________ 4. Client is reluctant to relocate even temporarily and may encounter severe adjustment problems
________ 5. Client strongly opposed to temporary relocation, adjustment problems would definitely endanger chances for success

E. Availability of Transportation

________ 1. Client has easy access to an automobile or inexpensive public transportation
________ 2. Client must be driven by family, friends, or use taxi, which are available
________ 3. Client must be driven by family, friends, or use taxi, but these resources are not readily available
________ 4. Many special considerations must be made by the counselor to provide transportation
________ 5. Client is homebound or must remain in a hospital or institution

II. EDUCATION

A. ________ Years of Academic Schooling
B. ________ Months of Trade or Vocational School
C. ________ Months of O.J.T.
D. ________ Months of Adjustment Training

III. ECONOMIC/VOCATIONAL STATUS

A. Vocational Level

________ 1. Professional, Technical and Managerial
________ 2. Licensed or certified trades and crafts, or other highly skilled work
________ 3. Semi-skilled and clerical
________ 4. Unskilled
________ 5. Disability status precludes employment

B. Weekly Earnings

________ 1. $100.01 per week and above
________ 2. $70.01 per week to $100.00
________ 3. $50.01 per week to $70.00
________ 4. $10.01 per week to $50.00
________ 5. $10.00 per week and below

C. Work Status

________ 1. Wage or salaried worker (competitive labor market) or self-employed (except BEP
________ 2. Wage or salaried worker (sheltered workshop), state agency managed business enterprise (BEP)
________ 3. Homemaker, unpaid family worker, not working student
________ 4. Trainee or worker (non-competitive labor market)
________ 5. Not working other

D. Primary Source of Support

________ 1. Own Earnings
________ 2. Dividends, Interest, Rent, and Savings
________ 3. Family and friends, or non-disability insurance (Retirement, Survivors, Annuity, etc.)
________ 4. Disability and Sickness Insurance (SSDI, Workmen's Compensation, Civil Service, etc.)
________ 5. Public Assistance, Private Relief, or Resident of Public Institution

E. Dependency of Client on Others for Financial Support

________ 1. Completely independent
________ 2. Approximately 25% of income comes from sources other than earnings
________ 3. Approximately 50% of income comes from sources other than earnings
________ 4. Approximately 75% of income comes from sources other than earnings
________ 5. Totally dependent on sources other than earnings

IV. PHYSICAL FUNCTIONING

A. General Health Status Other Than Disability

________ 1. Feels good most of the time; has feelings of vitality
________ 2. Generally feels good, but reports minor problems that seem reasonable
________ 3. Multiple complaints, which seem mostly reasonable
________ 4. Multiple complaints that seem mostly unjustified by physical condition
________ 5. Multiple complaints that seem totally unjustified by his physical condition

B. Mobility

________ 1. Totally independent
________ 2. Ambulatory, but somewhat restricted or with minimal use of devices
________ 3. Ambulatory with major devices, as unassisted wheelchair
________ 4. Ambulatory only with assistance of another person, as assisted wheelchair
________ 5. Bedridden

C. Physical Independence for Tasks Other than Mobility

________ 1. Totally independent
________ 2. Minimal assistance required
________ 3. Dependent for one major or several minor tasks
________ 4. Dependent for several major tasks
________ 5. Constant need for attendant services

D. Work Tolerance

________ 1. Minimal restrictions to type of work client can do
________ 2. Occupations limited to light physical activity but able to work full-time
________ 3. Sedentary work, low stress, or close supervision required, but able to work full-time
________ 4. Unable to work full-time because of mental or physical condition
________ 5. Current disability status precludes employment

E. Prominence of Vocationally Handicapping Condition (Including Mental and Emotional)

Handicap is:
________ 1. Hidden and cannot be directly observed
________ 2. Hidden and would only be observed episodically
________ 3. Noticeable only after a period of interviewing, or only slightly noticeable
________ 4. Marked and obvious, noticeable at once and continually manifest
________ 5. Marked, obvious, and continually manifest and will be repugnant to most employers

F. Compensatory Skills

________ 1. Has developed in other skill areas or with the use of devices, almost total compensation for disability
________ 2. Has significant development in other skill areas, or with the use of devices, abilities which help compensate for disability
________ 3. No real development in other skill areas and minimal use of devices
________ 4. Some deterioration in other skill areas
________ 5. Substantial deterioration in other skill areas

V. ADJUSTMENT TO DISABILITY

A. Identification with Worker Role

________ 1. Client feels personal need to be independent, and do his share
________ 2. Identity to worker role developing or deteriorated somewhat since disability but wants to work
________ 3. Weak identity to worker role, little idea of day-to-day work demands
________ 4. Client has adjusted to being dependent, talks of working but is unconvincing
________ 5. Client strongly identifies with handicap and clings to dependent role

B. Compatibility of Employment Expectations with Client's Personality and Physical Condition

________ 1 Client seems ideally suited for the work he desires
________ 2 Client's employment expectations are reasonable, although not ideal
________ 3 Client has no ideas concerning possible vocational goals, or his ideas are more "day dreams" than employment expectations
________ 4 Client's employment expectations are very unrealistic and impractical
________ 5 Client's employment expectations are so totally unrealistic and impractical, counselor must work with other professional persons, agencies, or institutions before client can proceed in the rehabilitation process

C. Client's Confidence in Himself as a Worker

________ 1 Highly favorable, client's self-confidence inspires confidence from others
________ 2 Client believes he can and will be a good employee in spite of his handicap
________ 3 Client feels he will become a fairly good employee but exhibits little initiative
________ 4 Client excessively timid or shows unimpressive over-confidence
________ 5 Client can never see himself as being able to hold a job

VI. SOCIAL COMPETENCY

A. Language Facility

________ 1 Reads and writes well, has no trouble understanding and communicating common vernacular and could learn to use technical language
________ 2 Reads, speaks, and writes adequately, has no particular problem filling out employment applications, or holding job interview
________ 3 Reads, speaks, and writes adequately for job applications and interview, but speaks slowly and may have some difficulty with other than simple written instructions
________ 4 Reads, speaks and/or writes poorly, and will have difficulty interpreting even simple written instructions
________ 5 Almost complete lack of language, functionally illiterate, extremely small vocabulary

B. Decision-Making Ability

________ 1 Takes strong active role in decision making
________ 2 Slow to make decisions but makes his own decisions
________ 3 Wants others to make decisions but will take some part in decision-making process
________ 4 Others make decisions for him and manage his personal affairs
________ 5 Will neither help make decisions nor take action on help from others; counselor must work with other professional agencies, persons, or institutions before client can proceed in the rehabilitation process

C. Role in Family

________ 1 Assumes appropriate role
________ 2 Assumes appropriate role but some counselor reservation
________ 3 Participates in familial affairs but evidence of underlying ambivalence toward family
________ 4 Refuses to assume appropriate role
________ 5 Conscious effort to disrupt family

D. Family Support

________ 1 Good, family shows great deal of understanding of client, very supportive and helpful
________ 2 Moderate, although not ideal, support is adequate
________ 3 Fair, support given but is inappropriate, evidence of underlying ambivalence on the part of the family
________ 4 Poor, support given but there is definite indifference on the part of the family toward client or his rehabilitation
________ 5 Very poor, family definitely non-supportive, strong opposition

SERVICE OUTCOME MEASUREMENT SCALE A

INSTRUCTIONS

RESEARCH REPORT FORM A

PRETEST-POSTTEST

INSTRUMENTATION AND PRACTICE EXERCISES

The purpose of this form is to document the type and severity of the client's problems and show the changes in the client's level of functioning that have occurred during the rehabilitation process. Items from the R-300 have been used whenever possible to facilitate filling out the form. However, the bulk of the form is counselor ratings of the level of client functioning in various areas.

All scales are five point ratings with anchoring definitions. The definitions given must be viewed as levels of functioning in relation to employment. The definitions are designed to eliminate as much as possible the problems encountered in the good, fair, poor type of ratings.

A second consideration to be kept in mind is that the client's employability is the attribute being rated. This may seem vague in some items in the area of social competency; however, it should be remembered that minimum levels of functioning in family relationships and decision-making must be maintained or personal affairs become employment problems. Also, remember that except for the items under I. Difficulty Only, the client's present level of functioning is rated.

Each item is listed below with a paragraph on the nature of the item and what it is trying to measure. The rater should first carefully read the definitions of each level, then the paragraph below. Then, he should reread the level definitions in reference to the explanatory paragraph. It is imperative for the reliability of ratings that different raters and users be working within the same framework. By carefully going through this Manual, many of the problems inherent in rating scales can be eliminated before they begin.

In the Appendix are found the Practice Exercises designed to help the rater check his understanding of the items. The items and the explanatory paragraph should be read carefully before you attempt to complete the Practice Exercises.

EXPLANATION OF ITEMS

On the top of the first page is simple demographic and identification data:

Counselor - Counselor's name

Client - Client's name

Date - Date form is filled out

1. State Agency Number - Your State Agency Number
2. Case Number - The case number you have assigned the client for your agency's purposes
3. Caseload Number - Counselor's caseload number
4. Status - Client's present status code
5. Reason for Closures (Only if Other than Status 26) - If the case is active or closed in Status 26 enter 0; otherwise, use appropriate code. (Use R-300 Codes. Oklahoma use R-105 Codes, Maryland use R-13 Codes, Utah use ORS-300 Codes.)
6. Age - Client's present age
7. Race - Code - Enter 1 for White, 2 Negro, 3 Indian, 4 Latin American, 5 Other
8. Sex - Enter 1 for Male, 2 for Female
9. Referral Source - Code - Use R-300 Codes (Oklahoma use R-105 Codes, Maryland use R-13 Codes, Utah use ORS-300 Codes)
10. Age Started Working - Client's age when he started his first job lasting over two months. If never employed, enter 00.
11. Previous Agency Contact - Enter 1 for Yes, 2 if No. Enter 1 (Yes) only if formal application for services was made.
12. Marital Status - Use Codes - 1 Married, 2 Widowed, 3 Divorced, 4 Separated, 5 Never Married.

13. No. of Dependents - Number determined in the same manner as R-300 (Oklahoma R-105 Codes, Maryland R-13 Codes, Utah ORS-300 Codes)

14. Age at Disablement - Age at onset of disability. If there was a gradual deterioration of the client's condition, use age at which the client first showed signs of functional deterioration.

15. Primary Disability - Client's primary disability Code.

16. Secondary Disability - Client's secondary disability code, if any; otherwise enter 000.

17. No. of Other Documented Disabilities - Enter the number of disabilities which are documented in the case record, if any. Otherwise, enter 0.

18. Weekly Earnings - Dollar amount of weekly earnings (leave off cents).

I. DIFFICULTY ONLY - these items are added to the instrument to give a clearer idea of difficulty at intake into the program. These five items are differentiated from the rest of the items in that rather than establishing a level of functioning, they are predictive in nature. With the addition of these items, a clearer picture can be obtained not only as to how much change will be required, but also the difficulty with which those changes will be made.

I. DIFFICULTY ONLY

A. Anticipated Change in Client's Level of Functioning During Services

_____1. Alleviate
_____2. Improve Greatly
_____3. Improve Somewhat
_____4. Remain the Same
_____5. Deteriorate

This is a prediction of the client's level of functioning as reflected by available information in relation to the disability after services. With training, devices, and treatment, the limiting effects of many disabilities will be at least "Improved Somewhat". However, in some cases, the counselor must develop skills in areas not directly related to the disability. As an example, a bedridden client's major handicap in a functional framework might be his lack of mobility. At closure, he may use a wheelchair unassisted, in which case he has "Improved Greatly." If he still needs quite a bit of attendant services, he may have "Improved Somewhat." If this client will still be bedridden, he could either "Remain the Same" or "Deteriorate" although important services were provided.

B. Employment Prognosis

_____1. Presently employed in competitive labor market and will continue on same job or higher job
_____2. Employable at former job or another job without training
_____3. Vocational training required: client has training potential
_____4. Limited vocational training potential
_____5. No vocational training potential

This item is fairly well self-explanatory. It should be noted that the prognosis should be based on the client's capabilities. "Limited vocational training potential" should not be checked because of a motivation deficiency, but because a limitation in physical or mental capacity exists.

C. Employment History: To An Employer, the Client's Past Work History Would:

_____1. Make a very favorable impression
_____2. Make a favorable impression
_____3. Seems adequate
_____4. Seems inadequate, but acceptable with reservations
_____5. Extremely bad employment history

This item relies on the counselor's judgment of the client's work history. The counselor is to put himself in the position of the average employer and ask himself what kind of impression the client's work history will make. Because a history of institutionalization for mental illness or police record can present a handicap to employment in itself, it would be rated along with actual work history. For example, a client newly released from prison would be rated at Level 5, even if he has an otherwise good work history.

D. Availability of Facilities and Client's Attitude Toward Temporary Relocation (Minimum of three weeks)

_____1. All necessary facilities are available or client looks forward to temporary relocation
_____2. Client accepts temporary relocation and adjustment problems will be relatively few or will not be severe or client resists using available facilities
_____3. Client accepts temporary relocation but may have difficulty adjusting to his new surroundings
_____4. Client is reluctant to relocate even temporarily and may encounter severe adjustment problems
_____5. Client strongly opposed to temporary relocation; adjustment problems would definitely endanger chances for success

This item is intended to reflect problems that may arise due to the lack of facilities necessary for helping the client. It should be remembered that this item does not refer to facilities in general, but those needed for working with this particular client. If the necessary facilities are available or relocation will be short (less than three weeks), check level 1, or level 2 if client resists use of available facilities. If the client must temporarily relocate, the second element to consider is the client's attitude and potential adjustment problems. Affecting adjustment problems may be client's ability to adjust, presence of counselors at the facilities, or a close relative near the facility.

E. Availability of Transportation

_____1. Client has easy access to an automobile or inexpensive public transportation
_____2. Client must be driven by family, friends, or use taxi, which are available
_____3. Client must be driven by family, friends, or use taxi, but these resources are not readily available
_____4. Many special considerations must be made by the counselor to provide transportation
_____5. Client is homebound or must remain in a hospital or institution

This item is concerned with how well the client can move about in the community, get to and from rehabilitation facilities, job interviews, etc. Level 1 relates to the client who is mobile, either because he owns or has use of an automobile or can use relatively inexpensive public transportation without problem. At level 2, the client has less mobility than at level 1 due to the dependence on family, friends, or taxi service, but the resources are readily available and represent an inconvenience rather than a real problem. At level 3 the client may be in some general physical or mental condition as in level 2; however, because of the family situation, lack of money for a taxi, special vehicle requirements, etc., transportation presents a significant problem. Level 4 refers to the client for whom the counselor must arrange or provide transportation because of the client's physical or mental disability. Level 5 represents the institutional, homebound, or otherwise totally immobile client.

II EDUCATION

A. _____ Years of Academic Schooling
B. _____ Months of Trade or Vocational School
C. _____ Months of O.J.T.
D. _____ Months of Adjustment Training

A. Years of Academic Schooling. The number of years of training the client has had in formal schools, either grade school, secondary, highschool or college. Remedial education should be scored in relation to grade level attained. If a high school diploma was received, enter grade 12. However, if G.E.D. Certificate was obtained, enter 12.

B. Months of Trade or Vocational School. The number of months in a trade or vocational school outside of regular highschool courses should be entered here. If a client has been scored 11 (Years) in the academic status and took a welding course in his sophomore year in high school, score him 0 (Months) in trade or vocational school if he has no other training.

C. Months of O.J.T. - The months in a recognized on-the-job training program.

D. Months of Adjustment Training. The months in a regular training course in the use of devices, developing skills that help compensate for the client's disability, adjustment to world of work, psychological adjustment, etc.

III. ECONOMIC/VOCATIONAL STATUS

A. Vocational Level

_____1. Professional, Technical and Managerial
_____2. Licensed or certified trades and crafts, or other highly skilled work
_____3. Semi-skilled and clerical
_____4. Unskilled
_____5. Disability status precludes employment

Vocational Level refers to the type of job the client could or is presently holding, that is the job the client is presently capable of holding. Level 1 is professional (doctors, lawyers, educators, counselors, etc.), highly technical (engineers, architects), and managerial (managers, accountants, officials). Level 2 is skilled labor. These occupations are usually licensed or certified by federal, state or local governments or a trade association; however, exceptions to this rule of thumb must be made in certain cases such as farmers or farm workers who may fall at any level, and certain types of secretaries whose work and salary may place them in Level 2 or Level 1. Level 3 relates to semi-skilled occupations that require a minimum of training at least at entry level jobs. An apprentice would be rated at level 3 until he receives his journeyman's license. Level 4 is unskilled labor and work which requires no formal training over two weeks or only a short on-the-job orientation period is required. At level 5 the limitations imposed by the client's disability prevent him from maintaining employment. If the client is unemployed but could perform unskilled labor, rate him at level 4 or the appropriate level for the job he could presently perform.

B. $________Weekly Earnings

_____1. $100.01 per week and above
_____2. $ 70.01 per week to $100.00
_____3. $ 50.01 per week to $70.00
_____4. $ 10.01 per week to $50.00
_____5. $ 10.00 per week and below

In this item, simply check the appropriate range for the client's weekly earnings.

C. Work Status
_____1. Wage or salaried worker (competitive labor market) or self-employed (except BEP)
_____2. Wage or salaried worker (sheltered workshop), state agency managed business enterprise (BEP)
_____3. Homemaker, unpaid family worker, not working student
_____4. Trainee or worker (non-competitive labor market)
_____5. Not working other

The items in this level correspond with the R-300 (Oklahoma R-105, Maryland R-13, Utah ORS-300) codes with level 1 being codes 1 and 3; level 2 being codes 2 and 4; level 3 being codes 5, 6, and 7; level 4 being code 9, and level 5 being code 8.

D. Primary Source of Support
_____1. Own Earnings
_____2. Dividends, Interest, Rent, and Savings
_____3. Family and friends, or non-disability insurance (retirement, survivors, annuity, etc.)
_____4. Disability and Sickness Insurance (SSDI, Workmen's Compensation, Civil Service, etc.)
_____5. Public Assistance, Private Relief, or Resident of Public Institution

Primary source of support refers to largest single source of income regardless of the amount it contributes to his total income. Level 1 and level 2 are self-explanatory. Level 3 includes not only family and friends, but also non-disability related insurance; that is, the reason the client is receiving benefits has nothing to do with his disability. Level 4 is disability or sickness insurance of all types, while level 5 relates to those clients who are dependent on public or private relief agencies or residents of public institutions.

E. Dependency of Client on Others for Financial Support
_____1. Completely independent
_____2. Approximately 35% of income comes from sources other than earnings
_____3. Approximately 50% of income comes from sources other than earnings
_____4. Approximately 75% of income comes from sources other than earnings
_____5. Totally dependent on sources other than earnings

This item seeks a finer measure of the client's financial independence than can be inferred from "Weekly Earnings" alone. Financial independence refers to the client's ability to provide for himself without relying on others. If a client receives money from an outside source such as a relative, dividends, etc., but the client could live on his own earnings, he would be classified as "Completely independent". If the client must rely on non-monetary support such as free child care or medicine, he would be classified in the appropriate category relative to the approximate amount these services would cost the client if he could afford to pay for them himself. Homemakers and unpaid family workers at closure will be rated as completely dependent, if unpaid.

IV. PHYSICAL FUNCTIONING

A. General Health Status Other than Disability

_____1. Feels good most of the time; has feelings of vitality
_____2. Generally feels good, but reports minor problems that seem reasonable
_____3. Multiple complaints which seem mostly reasonable
_____4. Multiple complaints that seem mostly unjustified by his physical condition
_____5. Multiple complaints that seem totally unjustified by his physical condition

This item is intended to give a general idea of the client's health other than problems directly a function of the disability. The last two levels are distinguished from the first three by the element of doubt concerning the legitimacy of the complaints. A client checked at the last two levels would be one who impresses the counselor as a hypochondriac, one who tends to be a complainer, or who tries to hide behind many chronic, apparently unrealistic complaints.

B. Mobility

_____1. Totally independent
_____2. Ambulatory, but somewhat restricted or with minimal use of devices
_____3. Ambulatory with major devices, as unassisted wheelchair
_____4. Ambulatory only with assistance of another person, as assisted wheelchair
_____5. Bedridden

Ambulatory has to do with the person's ability to move about in a limited area such as a shop, office building, school, or hospital. "Totally independent" would be checked for a person who moves about with normal speed and agility for a person of his age. "Ambulatory, but somewhat restricted or with minimal use of devices" would be a client who walks slowly, uses a brace, cane (not blind), limps, or an appliance that does not have the bulk of a wheelchair or walker. "Ambulatory with major devices, as unassisted wheelchair" refers to larger devices, cane (blind) or several smaller devices (as double leg braces and crutches), but retains the aspect of independence from help from other people, which distinguishes the level of "Ambulatory only with assistance of another person." "Bedridden" refers to a client who for all practical purposes is confined to bed.

C. Physical Independence for Tasks Other than Mobility
_____1. Totally independent
_____2. Minimal assistance required
_____3. Dependent for one major or several minor tasks
_____4. Dependent for several major tasks
_____5. Constant need for attendant services

Physical Independence in this category is exclusive of the area covered by the item of "Mobility". This item covers self-care activities, writing, reading, and other basic skills. To rate this item, the rater should rate the problem in terms of minor tasks being a small inconvenience, and major tasks being a significant periodical inconvenience to the employer or coworkers.

D. Work Tolerance
_____1. Minimal restrictions to type of work client can do
_____2. Occupations limited to light physical activity but able to work full-time
_____3. Sedentary work, low stress, or close supervision required; but able to work full-time
_____4. Unable to work full-time because of mental of physical condition
_____5. Current disability status precludes employment

Work Tolerance refers to limitations as to the types of work a client can do and the time the client can stay on the job. The first three levels refer to limitations as to the type of work the client can do. If the client can do only sedentary work, increasing severity is reflected in the time a client can stay working. In reference to mental disabilities, a client who could work a regular full-time job but requires low stress, close supervision, or other special job conditions, would be rated at level 3 "Sedentary work, low stress, or requires close supervision, but able to work full-time".

E. Prominence of Vocationally Handicapping Condition (Including Mental and Emotional) Handicap is:
   _____1. Hidden and cannot be directly observed
   _____2. Hidden and would only be observed episodically
   _____3. Noticeable only after a period of interviewing, or only slightly noticeable
   _____4. Marked and obvious, noticeable at once and continually manifest
   _____5. Marked, obvious, and continually manifest and will be repugnant to most employers

How obvious the handicap is should be rated as it might be noticed by a potential employer. The last definition might be considered as handicaps that would preclude saleswork or occupations involving a great deal of public contact.

F. Compensatory Skills
   _____1. Has developed in other skill areas or with the use of devices, almost total compensation for disability
   _____2. Has significant development in other skill areas, or with the use of devices, abilities which help compensate for disability
   _____3. No real development in other skill areas and minimal use of devices
   _____4. Some deterioration in other skill areas
   _____5. Substantial deterioration in other skill areas

Compensatory skills are those skills and techniques the client has developed to help overcome the limiting effects of his disability. The use of devices, physical development, or learning new ways to accomplish old tasks are examples of compensatory skills. The key to this item is how much has the learning of new skills reduced the limiting effects of the disability? Learning new job skills to compensate for loss of old job skills is not included in this item; however, social adjustment training could be compensatory skill for a client with a behavior disorder, or a mental patient.

V. ADJUSTMENT TO DISABILITY

A. Identification with Worker Role

_____1. Client feels personal need to be independent, and do his share
_____2. Identity to worker role developing or deteriorated somewhat since disability but wants to work
_____3. Weak identity to worker role, little idea of day-to-day work demands
_____4. Client has adjusted to being dependent; talks of working but is unconvincing
_____5. Client strongly identifies with handicap and clings to dependent role

The client's attitude toward dependency and the worker role is rated from a personal need to be independent to a total life style and personal orientation built around the dependency caused or excused by the disability. The second level differentiates clients who are in the process of solidifying their identity to the worker role and clients who formerly had a strong worker identity which has weakened somewhat since the onset of the disability; however, the clients at the third level have never developed at best only a weak identity as a worker and is differentiated from level 2 by the absence of developing in a positive direction or the absence of a basic worker identity. Clients at level 4 have adjusted to being dependent and may talk about working; however, this seems only for the benefit of the counselor and is unconvincing. Level 5 is distinguished by the intensity and more total involvement of the client with the dependency role.

B. Compatibility of Employment Expectations with Client's Personality and Physical Condition

_____1. Client seems ideally suited for the work he desires
_____2. Client's employment expectations are reasonable, although not ideal
_____3. Client has no ideas concerning possible vocational goals, or his ideas are more "day dreams" than employment expectations
_____4. Client's employment expectations are very unrealistic and impractical
_____5. Client's employment expectations are so totally unrealistic and impractical, counselor must work with other professional persons, agencies, or institutions before client can proceed in the rehabilitation process

Compatibility of employment expectations with personality and physical condition covers not only the area of realistic understanding of the physical limitations of the disability, but also the understanding of personality strong and weak points in relation to employment. The first level refers to individuals who have realistic concepts of their limitations and themselves, as differentiated from clients having a reasonable vocational goal, but not as well integrated with aptitudes, abilities, and interests. Also, the second level would cover a vocational goal which seems reasonable to the counselor; however, he has some reservations. The third level pertains to clients having no firm ideas as to what they should do or who state unrealistic employment expectations which the client gives up when questioned closely. The fourth level deals with the client who not only has unrealistic and impractical goals, but also believes they are realistic, resulting in a significant barrier to the client's rehabilitation. A client should not be placed accordingly in the last level unless his unrealistic outlook is symptomatic of a larger loss of contact with reality. In this case, the counselor will be acquiring short-term therapy or be working simultaneously with a mental institution or mental health agency.

C. Client's Confidence in Himself as a Worker

_____1. Highly favorable, client's self-confidence inspires confidence from others

_____2. Client believes he can and will be a good employee in spite of his handicap

_____3. Client feels he will become a fairly good employee but exhibits little initiative

_____4. Client excessively timid or shows unimpressive overconfidence

_____5. Client can never see himself as being able to hold a job

This item deals with self-confidence and self-concept in terms of the client's perception of himself as a worker or ability to get a job done. The first level refers to those clients who can take initiative and inspire others to have confidence in him. The counselor often has clients who "talk a good stick" but leave the counselor with many reservations, or the counselor feels the client is trying to put something over on him. This client reaction is equivalent to excessive shyness and timidity and should be rated in level 4. Levels 2 and 3 fall in between being differentiated by the amount of initiative the client feels he can take. Level 5 refers to those clients who are self-deprecating to the extreme, and as a result of this feeling of failure, the client will probably leave any job he is placed on at the first bit of rough going and feel he has proved what he has known all along--that he is destined to be a failure.

VI. SOCIAL COMPETENCY

A. Language Facility

_____1. Reads and writes well; has no trouble understanding and communicating common vernacular and could learn to use technical language
_____2. Reads, speaks, and writes adequately; has no particular problem filling out employment applications, or holding job interview
_____3. Reads, speaks, and writes adequately for job applications and interview, but speaks slowly and may have some difficulty with other than simple written instructions
_____4. Reads, speaks and/or writes poorly, and will have difficulty interpreting even simple written instructions
_____5. Almost complete lack of language, functionally illiterate, extremely small vocabulary

This item deals with basic language skills needed on the job. The first level covers not only very fluent clients, but also any client who can express himself clearly if client's vocabulary is not large. The second level is for clients who use of language is adequate for job interviews, filling out applications, and making business telephone calls and following most written instructions. Clients rated in level 3 would have difficulty interpreting complex instructions and would be limited to low level office work. A client at level 4 would have a great deal of trouble filling out job applications and holding a good interview; on the job, he may have trouble following even simple written instructions. The last level refers to clients who have extremely limited verbal as well as written vocabularies.

B. Decision-Making Ability

_____1. Takes strong active role in decision making
_____2. Slow to make decisions but makes his own decisions
_____3. Wants others tomake decisions but will take some part in decision making process
_____4. Others make decisions for him and manage his personal affairs
_____5. Will neither help make decisions nor take action on help from others; counselor must work with other professional agencies, persons, or institutions before client can proceed in the rehabilitation process

Decision-making ability refers not only to making decisions but implies acting on these decisions. Also implied is the ability to manage his own affairs. The first level deals with the client who meets his problems head on, makes his own decisions, and needs information and financial help rather than counseling; whereas, a client on the second level may seem overcautious, but maintains his independence. At the third level, a client looks for an easy way out of the decision-making process and maintains possibly only a veto power in this process. At the fourth level, the client does not make decisions, must be lead and prodded to take any action. At level five, the client's immobility in taking any action and making decisions necessitates work with an outside agency such as a mental institution, mental health clinic, or the counselor must plan for therapy from outside professional resources before the client can proceed in the rehabilitation process.

C. Role in Family

_____1. Assumes appropriate role
_____2. Assumes appropriate role but some counselor reservation
_____3. Participates in familial affairs but evidence of underlying ambivalence towards family
_____4. Refuses to assume appropriate role
_____5. Conscious effort to disrupt family

The appropriateness of the client's role in the family can be a difficult area to rate because of variations in age, sex, race, and physical and emotional condition of the other family members. The distinction between Level 1 and Level 2 is made basically on how the rater feels about his judgment. In these two levels, the client seems to assume the appropriate role for his particular family situation, but Level 2 represents a somewhat guarded judgment. Level 3 has the client participating in family affairs, but only at a superficial level when it seems unjustified by the family's reaction to the client, while in Level 4 not even superficial participation is present. Level 5 refers to clients actively trying to disrupt the family, and may be seen as a psychiatric problem. Remember that the appropriateness of the role the client plays is what is being rated and, in some instances, a client who is uninvolved with his family may, because of the emotional climate at home, be rated on Level 1 or 2. Persons other than biological parents may be rated as family if they perform the family's function in relation to the client. If the client has no immediate family, rate him at Level 2.

D. Family Support

_____1. Good; family shows great deal of understanding of client; very supportive and helpful
_____2. Moderate; although not ideal, support is adequate
_____3. Fair; support given but is inappropriate; evidence of underlying ambivalence on the part of the family
_____4. Poor; support given but there is definite indifference on the part of the family toward client or his rehabilitation
_____5. Very Poor; family definitely non-supportive, strong opposition

Family Support is rated not only by whether support is given, but also whether it is appropriate or not. By rating the item in this manner, information reflects the understanding of the client by his family and is rated along with the presence of active support. The client's family can be every bit as unrealistic about the client's disability and capacities as the client himself. At the first level, the family is very involved and shows a good understanding of the client's situation. In Level 4, the family support is still adequate, but does not show the quality in understanding of the client and/or appropriateness of the support that exists at Level 1. The third level refers to the family who wants the client to live up to their expectations, which are out of touch, either high or low, with the client's capabilities. The fourth level represents superficial support that only serves as a cover-up for underlying indifference. At Level 5 the family offers active opposition and wants to keep the client dependent on the family. If the client has no family, place him at Level 2, because he does not have the positive effect of a supportive family. Persons other than biological parents may be rated as family if they perform the family's function in relation to the client.

APPENDIX

Practice Exercises

Below are some practice exercises designed to help the rater check his understanding of the individual items.

A hypothetical case is listed first and then the items to be rated according to the information given in the example. Be careful not to read anything into the example. Consider all variables not mentioned as having no effect on the case. After the rating is made, check your rating with the assigned rating. The assigned rating and the reason for the rating is given after the item. The reason for the assigned rating is given to insure that the framework in which the rater is operating is consistent with that of the authors. Refer back to the explanatory paragraph if you are still unsure of the reason an example was assigned its rating.

Example 1: Ruth is a 35-year-old beautician who is presently employed at a local beauty shop. She makes approximately $35 per week and is paid on a commission basis. She seems to have been unable to retain a steady clientele because her dental condition tends to repulse potential customers in spite of her otherwise neat appearance and good health. Her employer reports she is a good worker, and her employment history shows she has worked steadily since graduating from beauty school at the age of 21. Her present low earnings seem to coincide with the onset of her dental problems. Because of her steadily decreasing income, she now has severe financial problems. Her present employer is thinking of letting Ruth go, but has agreed to keep her on if her dental problem is corrected. Her plan calls for corrective surgery and full dentures at a local hospital. She will then return to her present job.

I. DIFFICULTY ONLY

A. Anticipated Change in Client's Level of Functioning During Services

_____1. Alleviate
_____2. Improve Greatly
_____3. Improve Somewhat
_____4. Remain the Same
_____5. Deteriorate

Level 1 - Alleviate - is assigned because the handicap to employment is her appearance caused by her dental condition, which will be unnoticeable with the new dentures.

B. Employment Prognosis

_____1. Presently employed in competitive labor market and will continue on same job or higher job
_____2. Employable at former job or another job without training
_____3. Vocational training required; client has training potential
_____4. Limited vocational training potential
_____5. No vocational training potential

Level 1 - Presently employed in competitive labor market and will continue on same job or higher job - is assigned because her present employer has agreed to retain her if the dental problems are overcome.

C. Employment History: To an Employer, the Client's Past Work History Would:

_____1. Make a very favorable impression
_____2. Make a favorable impression
_____3. Seems adequate
_____4. Seems inadequate, but acceptable with reservations
_____5. Extremely bad employment history

Level 1 - Make a very favorable impression - is assigned because of her steady employment since leaving beauty school and former higher earnings.

D. Availability of Facilities and Client's Attitude Toward Temporary Relocation (Minimum of three weeks)

_____1. All necessary facilities are available or client looks forward to temporary relocation
_____2. Client accepts temporary relocation and adjustment problems will be relatively few or will not be severe or client resists using available facilities
_____3. Client accepts temporary relocation but may have difficulty adjusting to his new surroundings
_____4. Client is reluctant to relocate even temporarily and may encounter severe adjustment problems
_____5. Client strongly opposed to temporary relocation; adjustment problems would definitely endanger chances for success

Level 1 - All necessary facilities are available or client looks forward to temporary relocation - because work will be done in local hospital.

IV. PHYSICAL FUNCTIONING

A. General Health Status Other than Disability

_____1. Feels good most of the time; has feelings of vitality
_____2. Generally feels good, but reports minor problems that seem reasonable
_____3. Multiple complaints, which seem mostly reasonable
_____4. Multiple complaints that seem mostly unjustified by his physical condition
_____5. Multiple complaints that seem totally unjustified by his physical condition

Level 1 - Feels good most of the time; has feelings of vitality - since good health is reported and no other health problems are mentioned.

B. Mobility

_____1. Totally Independent
_____. Ambulatory, but somewhat restricted or with minimal use of devices
_____. Ambulatory with major devices, as unassisted wheelchair
_____4. Ambulatory only with assistance of another person, as assisted wheelchair
_____5. Bedridden

Level 1 - Totally Independent - since good health is reported and no other health problems are mentioned.

C. Physical Independence for Tasks Other than Mobility

_____1. Totally independent
_____2. Minimal assistance required
_____3. Dependent for one major or several minor tasks
_____4. Dependent for several major tasks
_____5. Constant need for attendant services

Level 1 - Totally independent - since good health is reported and no other health problems are mentioned.

D. Work Tolerance

_____1. Minimal restrictions to type of work client can do
_____2. Occupations limited to light physical activity but able to work full time
_____3. Sedentary work, low stress, or close supervision required; but able to work full-time
_____4. Unable to work full-time because of mental or physical condition
_____5. Current disability status precludes employment

Level 1 - Minimal restrictions to type of work client can do - since the work tolerance item deals with physical and mental capabilities to sustain work activity, and no side effects of the dental problem have been noted. Items A, B, C, and D under PHYSICAL FUNCTIONING would become even easier if the medical report was available.

E. Prominence of Vocationally Handicapping Condition (Including Mental and Emotional) Handicap is:

_____1. Hidden and cannot be directly observed
_____2. Hidden and would only be observed episodically
_____3. Noticeable only after a period of interviewing, or only slightly noticeable
_____4. Marked and obvious, noticeable at once and continually manifest
_____5. Marked, obvious, and continually manifest and will be repugnant to most employers

Level 5 - Marked, obvious, and continually manifest, and will be repugnant to most employers - This is seemingly the client's only real problem and is the justification for giving services. Her low earnings and her present employer's comments confirm this problem. At closure, if her dental work is successful, she will be rated at level 1 - Hidden and cannot be directly observed.

F. Compensatory Skills

_____1. Has developed in other skill areas or with the use of devices, almost total compensation for disability
_____2. Has significant development in other skill areas, or with the use of devices, abilities which help compensate for disability
_____3. No real development in other skill areas and minimal use of devices
_____4. Some deterioration in other skill areas
_____5. Substantial deterioration in other skill areas

Level 3 - No real development in other skill areas and minimal use of devices. Her dental problem has not been hidden successfully and the client has not developed any means to compensate for it, as reflected by her low earnings and her employer's thoughts of letting her go. At closure, if her dental work was successful, she would be rated at level 1 - Has developed in other skill areas or with the use of devices, almost total compensation for disability.

The items in Social Competency and Adjustment to Disability for Ruth would be rated probably at Level 1 or 2 since she is working and her employer reports she is a good worker and is willing to keep her on the job if the dental problem is corrected. Not enough information is given to make finer distinctions.

Example 2. Paul is a 19-year-old male who wants to go into law school. His I.Q. on the WAIS was 97 and he graduated from high school with about average grades. Because of the residual effects of polio, he must use a brace to walk. When talking to the counselor about his employment expectations, he stated he wants to go to law school. After discussing his grades and test results with the counselor, he maintains that his high school grades and I.Q. score resulted from not trying and should not be held against him.

I. DIFFICULTY ONLY

A. Anticipated Change in Client's level of Functioning During Services

_____1. Alleviate
_____2. Improve Greatly
_____3. Improve Somewhat
_____4. Remain the Same
_____5. Deteriorate

Level 4 - Remain the Same - was assigned. Paul is already using a brace and vocational rehabilitation will not be providing services in this area.

IV. PHYSICAL FUNCTIONING

B. Mobility

_____1. Totally independent
_____2. Ambulatory, but somewhat restricted or with minimal use of devices
_____3. Ambulatory with major devices, as unassisted wheelchair
_____4. Ambulatory only with assistance of another person, as assisted wheelchair
_____5. Bedridden

Level 2 - Ambulatory but somewhat restricted or with minimal use of devices - has been assigned. Paul is able to walk with his brace, but it would restrict activity. If a leg brace and crutches were required, he would be assigned Level 3 - Ambulatory with major devices, as unassisted wheelchair.

F. Compensatory Skills

_____1. Has developed in other skill areas or with the use of devices, almost total compensation for disability
_____2. Has significant development in other skill areas, or with the use of devices, abilities which help compensate for disability
_____3. No real development in other skill areas and minimal use of devices
_____4. Some deterioration in other skill areas
_____5. Substantial deterioration in other skill areas

Level 2 - Has significant development in other skill areas, or with the use of devices, abilities which help compensate for disability - This is assigned because of the use of the brace. Level 1 would require more knowledge regarding how well he walks and how long he can stay on his feet.

V. ADJUSTMENT TO DISABILITY

D. Compatibility of Employment Expectations with Client's Personality and Physical Condition

_____1. Client seems ideally suited for the work he desires
_____2. Client's employment expectations are reasonable, although not ideal
_____3. Client has no ideas concerning possible vocational goals, or his ideas are more "day dreams" than employment expectations
_____4. Client's employment expectations are very unrealistic and impractical
_____5. Client's employment expectations are so totally unrealistic and impractical, counselor must work with other professional persons, agencies, or institutions before client can proceed in the rehabilitation process

Level 4 - Client's employment expectations are very unrealistic and impractical - is assigned. Both his I.Q. score and previous grades in school make the vocational goal of attorney unrealistic. His rationalization for his score and grades does not seem very well thought out. He is not placed in level 3 because he maintains that he wants to be a lawyer even after discussions with the counselor pertaining to his I.Q. score and past grades.

Example 3. Pete is a 20-year-old man who was referred to vocational rehabilitation by the state reformatory with a disability of personality, character, and behavior disorder. This seems to be linked with the counselor's immediate impression that the client is hostile, fearful, and suspicious. Pete comes from an AFDC family of six children and has never had any kind of stable father influence. He lacks basic social skills, and this, along with his past record probably explains his fearfulness when talking to the counselor. The counselor's original impression was borne out in the psychological evaluation.

Pete had a good work record while in the Reformatory, marred only once by a confrontation with his workshop supervisor, whom Pete thought had been treating him unfairly. As a result, he was transferred to the shoe repair shop which was managed by an older man whom Pete seemed to like quite well. While in the shoe repair shop, Pete became quite proficient in shoe repair and general leather work. He has looked for employment at local shoe repair shops, but has never made it past the interview stage, probably because of his fearful, suspicious attitude towards others.

After two interviews, the counselor felt the client's attitude of suspiciousness and hostility was due to his fearfulness, lack of knowledge of basic social skills, and defensiveness. Therefore, Pete's plan calls for six weeks of prevocational training and several sessions with the counselor. Pete seems very motivated to take part in this plan and has a strong desire to "make it".

Pete is presently staying at a private, local halfway house, where counseling is available. The decision to stay at the halfway house was made by Pete before he left the Reformatory because of his disrupted home situation. He felt the need to escape the influence of two older brothers who had been in and out of prison. Pete's vocational goal is that of shoe repairman because although he could learn a more skilled trade, he feels confidence in his ability as a shoe repairman. It is felt an extended training course might be more than the client could handle until he has adjusted to the world of work and has been regularly employed for a while.

His intelligence is average and he works well with his hands. Although the counselor's initial impression of Pete was poor in regard to his ability to communicate, this seemed to be caused by client's suspiciousness and fearfulness rather than a basic language difficulty. Pete's physical health seems very good.

I. DIFFICULTY ONLY

A. Anticipated Change in Client's Level of Functioning During Services

_____1. Alleviate
_____2. Improve Greatly
_____3. Improve Somewhat
_____4. Remain the Same
_____5. Deteriorate

This item is difficult to rate with this type of case, but has been assigned Level 2 - Improve Greatly. The reason for this is client's strong desire to "make it" as evidenced by the counselor's opinion, voluntary decision to live in the halfway house, good prison record, and previous job seeking activity. This, coupled with the availability of counseling in rehabilitation at the halfway house and the group prevocational training should have a strong positive effect on the client.

B. Employment Prognosis

_____1. Presently employed in competitive labor market and will continue on same job or higher job
_____2. Employable at former job or another job without training
_____3. Vocational training required; client has training potential
_____4. Limited vocational training potential
_____5. No vocational training potential

Level 2 - Employable at former job or another job without training - has been assigned due to the vocational goal of shoe repairman chosen by client. Although he has never held the position in competitive employment, he has shown competence in this field and no training will be required.

C. Employment History: To An Employer, the Client's Past Work History Would:

_____1. Make a very favorable impression
_____2. Make a favorable impression
_____3. Seems adequate
_____4. Seems inadequate, but acceptable with reservations
_____5. Extremely bad employment history

Level 5 - Extremely bad employment history - has been assigned since client's conviction for a felony will be as damaging to the client as a bad employment history.

D. Availability of Facilities and Client's Attitude Toward Temporary Relocation (Minimum of three weeks)

_____1. All necessary facilities are available or client looks forward to temporary relocation
_____2. Client accepts temporary relocation and adjustment problems will be relatively few or will not be severe or client resists using available facilities
_____3. Client accepts temporary relocation but may have difficulty adjusting to his new surroundings
_____4. Client is reluctant to relocate even temporarily and may encounter severe adjustment problems
_____5. Client strongly opposed to temporary relocation; adjustment problems would definitely endanger changes for success

Level 1 - All necessary facilities are available or client looks forward to temporary relocation - is assigned because no temporary relocation is required. The halfway house move was a voluntary decision and will help him adjust to the outside world after being in the reformatory setting, rather than being a source of adjustment problems.

II. EDUCATION

A. _____Years of Academic Schooling
B. _____Months of Trade or Vocational School
C. _____Months of O.J.T.
D. _____Months of Adjustment Training

Education is usually a counting procedure; however, in this case, the rater would need more information as to the nature of the reformatory's shoe repair shop program before rating it as Trade or Vocational or O.J.T. training. The six week prevocational training should be rated at closure as 1½ months adjustment training.

III. ECONOMIC/VOCATIONAL STATUS

E. Dependency of Client on Others for Financial Support
_____1. Completely Independent
_____2. Approximately 25% of income comes from sources other than earnings
_____3. Approximately 50% of income comes from sources other than earnings
_____4. Approximately 75% of income comes from sources other than earnings
_____5. Totally dependent on sources other than earnings

Since client is unemployed, level 5 - Totally dependent on sources other than earnings - is assigned; however, if he is working at closure and still living in the halfway house, room and board must be considered before rating him at level 1 - Completely Independent.

IV. PHYSICAL FUNCTIONING

A. General Health Status Other than Disability
_____1. Feels good most of the time; has feelings of vitality
_____2. Generally feels good, but reports minor problems that seem reasonable
_____3. Multiple complaints, which seem mostly reasonable
_____4. Multiple complaints that seem mostly unjustified by physical condition
_____5. Multiple complaints that seem totally unjustified by his physical condition

B. Mobility
_____1. Totally independent
_____2. Ambulatory, but somewhat restricted or with minimal use of devices
_____3. Ambulatory with major devices, as unassisted wheelchair
_____4. Ambulatory only with assistance of another person, as assisted wheelchair
_____5. Bedridden

C. Physical Independence for Tasks Other than Mobility

_____1. Totally independent
_____2. Minimal assistance required
_____3. Dependent for one major or several minor tasks
_____4. Dependent for several major tasks
_____5. Constant need for attendant services

These items are assigned level 1 - Totally independent - as the handicap to employment has no relation to the client's physical condition.

D. Work Tolerance

_____1. Minimal restrictions to type of work client can do
_____2. Occupations limited to light physical activity but able to work full-time
_____3. Sedentary work, low stress, or close supervision required; but able to work full-time
_____4. Unable to work full-time because of mental or physical condition
_____5. Current disability status precludes employment

Level 3 - Sedentary work, low stress, or close supervision required; but able to work full-time - is assigned. The client's present fearfulness, hostility, and suspiciousness would require an extremely understanding employer, who the client could relate to in the same way as the supervisor in the reformatory shoe shop - a low stress type of job.

E. Prominence of Vocationally Handicapping Condition (Including Mental and Emotional)
Handicap is:

_____1. Hidden and cannot be directly observed
_____2. Hidden and would only be observed episodically
_____3. Noticeable only after a period of interviewing, or only slightly noticeable
_____4. Marked and obvious, noticeable at once and continually manifest
_____5. Marked, obvious, and continually manifest and will be repugnant to most employers

Level 4 - Marked and obvious, noticeable at once and continually manifest - is assigned. The counselor's immediate impression, mentioned at the beginning of the example, is the reason this handicap is rated at Level 4 rather than Level 3. Although the counselor may have established rapport with the client later, a prospective employer would not; and in the employment situation, the handicap would be continually manifest. At closure, the client may be rated at Level 1 or Level 2.

F. Compensatory Skills

_____1. Has developed in other skill areas or with the use of devices, almost total compensation for disability
_____2. Has significant development in other skill areas, or with the use of devices, abilities which help compensate for disability
_____3. No real development in other skill areas and minimal use of devices
_____4. Some deterioration in other skill areas
_____5. Substantial deterioration in other skill areas.

Level 3 - No real development in other skill areas and minimal use of devices - is assigned. The client shows no indication of developing compensating social skills. At closure, through the prevocational training, he may have learned the necessary social skills to handle a job interview, even though he is still fearful. His rating might then be at Level 2. If through the counseling he is less fearful, hostile, and suspicious, he has not developed compensatory skills, but has overcome his handicap.

V. ADJUSTMENT TO DISABILITY

A. Identification with Worker Role

_____1. Client feels personal need to be independent, and do his share
_____2. Identity to worker role developing or deteriorated somewhat since disability but wants to work
_____3. Weak identity to worker role, little idea of day-to-day work demands
_____4. Client has adjusted to being dependent; talks of working but is unconvincing
_____5. Client strongly identifies with handicap and clings to dependent role

Level 2 - Identity to worker role developing or deteriorated somewhat since disability - The client is attempting to break his pattern of maladjustment, but his lack of knowledge of the world of work, as demonstrated by the need for prevocational training, would put him in Level 2 rather than Level 1.

B. Compatibility of Employment Expectations with Client's Personality and Physical Condition

_____1. Client seems ideally suited for the work he desires
_____2. Client's employment expectations are reasonable, although not ideal
_____3. Client has no idea concerning possible vocational goals, or his ideas are more "day dreams" than employment expectations
_____4. Client's employment expectations are very unrealistic and impractical
_____5. Client's employment expectations are so totally unrealistic and impractical, counselor must work with other professional persons, agencies, or institutions, before client can proceed in the rehabilitation process

Level 2 - Client's employment expectations are reasonable although not ideal - The ideal situation would have the client working toward a vocational goal in a more skilled area but considering his present situation, his decision to stay with shoe repair is quite reasonable.

C. Client's Confidence in Himself as a Worker

_____1. Highly favorable, client's self-confidence inspires confidence from others
_____2. Client believes he can and will be a good employee in spite of his handicap
_____3. Client feels he will become a fairly good employee but exhibits little initiative
_____4. Client excessively timid or shows unimpressive overconfidence
_____5. Client can never see himself as being able to hold a job

Level 2 - Client believes he can and will be a good employee in spite of his handicap - In the example, it states that "he feels confident in his ability as a shoe repairman" and is rated at Level 2 because shoe repairman is his vocational goal. If he was training for another job, his rating might be lower.

VI. SOCIAL COMPETENCY

A. Language Facility

_____1. Reads and writes well; has no trouble understanding and communicating common vernacular and could learn to use technical language
_____2. Reads, speaks, and writes adequately; has no particular problem filling out employment applications, or holding job interview
_____3. Reads, speaks, and writes adequately for job application and interview, but speaks slowly and may have some difficulty with other than simple written instructions
_____4. Reads, speaks, and/or writes poorly, and will have difficulty interpreting even simple written instructions
_____5. Almost complete lack of language, functionally illiterate, extremely small vocabulary

Level 2 - Reads, speaks, and writes adequately; has no particular problem filling out employment applications or holding job interview - Client's problem is symptomatic of his disability and not his ability to use the language. This item would be easier to rate if test data were given in the example.

C. Role in Family

_____1. Assumes appropriate role
_____2. Assumes appropriate role but some counselor reservation
_____3. Participates in familial affairs but evidence of underlying ambivalence toward family
_____4. Refuses to assume appropriate role
_____5. Conscious effort to disrupt family

Level 2 - Assumes appropriate role, but counselor reservation - Considering the home environment, the decision to stay at the halfway house seems to be a good one; however, personal contact with the client's family would probably be required before the rater would feel comfortable to place this type of case at Level 1.

Example 4. Sam is a 38-year-old man who worked 14 years as a truck driver. Two years ago, he was involved in a serious accident, which left him paralyzed from the waist down. Sam still has good strength in his arms and handles his wheelchair quite well. He has not worked since his accident and his family's major source of income is his disability check, which is subsidized by his wife's $20 per week income from babysitting. Sam seems to want to work and has only minimally adjusted to his present situation. He has been accustomed to physical labor and cannot decide what job other than that he would like to do. Tests show about average mental ability and good manual and finger dexterity.

I. DIFFICULTY ONLY

B. Employment Prognosis

_____1. Presently employed in competitive labor market and will continue on same job or higher job
_____2. Employable at former job or another job without training
_____3. Vocational training required: client has training potential
_____4. Limited vocational training potential
_____5. No vocational training potential

Level 3 - Vocational training required; client has training potential - With average mental ability and good manual and finger dexterity, there should be several jobs client could learn.

III. ECONOMIC/VOCATIONAL STATUS

E. Dependency of Client on Others for Financial Support

_____1. Completely independent
_____2. Approximately 25% of income comes from sources other than earnings
_____3. Approximately 50% of income comes from sources other than earnings
_____4. Approximately 75% of income comes from sources other than earnings
_____5. Totally dependent on sources other than earnings

Level 5 - Totally dependent on sources other than earnings - is assigned. This item is rated on the client's earnings rather than the family's income.

IV. PHYSICAL FUNCTIONING

B. Mobility

_____1. Totally Independent
_____2. Ambulatory but somewhat restricted or with minimal use of devices
_____3. Ambulatory with major devices, as unassisted wheelchair
_____4 Ambulatory only with assistance of another person, as assisted wheelchair
_____5. Bedridden

Level 3 - Ambulatory with major devices, as unassisted wheelchair - is assigned since client has learned to handle his wheelchair quite well.

D. Work Tolerance

_____1. Minimal restrictions to type of work client can do
_____2. Occupations limited to light physical activity but able to work full-time
_____3. Sedentary work, low stress, or close supervision required; but able to work full-time
_____4. Unable to work full-time because of mental or physical condition
_____5. Current disability status precludes employment

Level 3 - Sedentary work, low stress, or close supervision required, but able to work full-time - because he must use a wheelchair.

E. Prominence of Vocationally Handicapping Condition (Including Mental and Emotional) Handicap is:

_____1. Hidden and cannot be directly observed
_____2. Hidden and would only be observed episodically
_____3. Noticeable only after a period of interviewing, or only slightly noticeable
_____4. Marked and obvious, noticeable at once and continually manifest
_____5. Marked, obvious, and continually manifest and will be repugnant to most employers

Level 4 - Marked and obvious, noticeable at once and continually manifest - because of wheelchair.

F. Compensatory Skills

_____1. Has developed in other skill areas or with the use of devices, almost total compensation for disability
_____2. Has significant development in other skill areas, or with the use of devices, abilities which help compensate for disability
_____3. No real development in other skill areas and minimal use of devices
_____4. Some deterioration in other skill areas
_____5. Substantial deterioration in other skill areas

Level 2 - Has significant development in other skill areas, or with the use of devices, abilities which help compensate for disability - has been assigned due to client's efficient use of his wheelchair.

V. ADJUSTMENT TO DISABILITY

A. Identification with Worker Role

_____1. Client feels personal need to be independent, and do his share
_____2. Identity to worker role developing or deteriorated somewhat since disability but wants to work
_____3. Weak identity to worker role, little idea of day-to-day work demands
_____4. Client has adjusted to being dependent; talks of working but is unconvincing
_____5. Client strongly identifies with handicap and clings to dependent role

Level 2 - Identity to worker role just developing or deteriorated somewhat since disability but wants to work - In spite of the time client has not worked, his long work history indicates previous identity as a worker. The time since his disability and lack of vocational goal seems more the result of the total change in life style than the learning of a dependency role.

B. Compatibility of Employment Expectations with Client's Personality and Physical Condition

_____1. Client seems ideally suited for the work he desires
_____2. Client's employment expectations are reasonable, although not ideal
_____3. Client has no ideas concerning possible vocational goals, or his ideas are more "day dreams" than employment expectations
_____4. Client's employment expectations are very unrealistic and impractical
_____5. Client's employment expectations are so totally unrealistic and impractical, counselor must work with other professional persons, agencies, or institutions before client can proceed in the rehabilitation process

Level 3 - Client has no ideas concerning possible vocational goals, or his ideas are more "day dreams" than employment expectations - The change from physical labor to sedentary work seems to be the cause of his difficulty with choosing a vocational goal, not unrealistic expectations as in Level 4.

Example 5. Joe is a 35-year-old ex-construction foreman. His disability is high quadraplegia and he has only gross upper extremity movements. Presently he has plateaued and no further physical improvement is expected. He is in a conventional wheelchair and requires attendant services for all functions except feeding. Testing shows he has about average mental ability. He has spent the last four months in the hospital and his family has visited him almost every day while in the hospital. They have also sat in on his physical and occupational therapy program and show a great deal of understanding and acceptance of the client.

His plan calls for providing an electric wheelchair, CO^2 muscle, and training as a bookkeeper. A coordinated training and therapy program at a rehabilitation training center is planned. However, the center is 80 miles from the client's home and because his wife works six days a week, she will only be able to visit him on Sundays for the six months he will be in training. This disturbs the client, but he accepts the situation as he does not want to be dependent on his wife's earnings. After training, he will at best still be dependent for transfer and many activities of daily living.

I. DIFFICULTY ONLY

B. Employment Prognosis

_____1. Presently employed in competitive labor market and will continue on same job or higher job
_____2. Employable at former job or another job without training
_____3. Vocational training required; client has training potential
_____4. Limited vocational training potential
_____5. No vocational training potential

Level 4 - Limited vocational training potential - Even after services, he will be severely limited as to the types of jobs he can learn to perform.

A. Anticipated Change in Client's Level of Functioning During Services

_____1. Alleviate
_____2. Improve Greatly
_____3. Improve Somewhat
_____4. Remain the Same
_____5. Deteriorate

Level 3 - Improve Somewhat - is assigned because of the dependency for many activities of daily living after services and the stability of the medical disability.

IV. PHYSICAL FUNCTIONING

C. Physical Independence for Tasks Other than Mobility

_____1. Totally independent
_____2. Minimal assistance required
_____3. Dependent for one major or several minor tasks
_____4. Dependent for several major tasks
_____5. Constant need for attendant services

Level 5 - Constant need for attendant services - at acceptance, because he is dependent for all tasks except feedings. At closure, if the plan is successful, he will be at Level 4 - Dependent for several major tasks - due to the help needed for transfer and activities of daily living.

I. DIFFICULTY ONLY

D. Availability of Facilities and Client's Attitude Toward Temporary Relocation (Minimum of three weeks)

_____1. All necessary facilities are available or client looks forward to temporary relocation
_____2. Client accepts temporary relocation and adjustment problems will be relatively few or will not be severe or client resists using available facilities
_____3. Client accepts temporary relocation but may have difficulty adjusting to his new surroundings
_____4. Client is reluctant to relocate even temporarily and may encounter severe adjustment problems
_____5. Client strongly opposed to temporary relocation; adjustment problems would definitely endanger chances for success

Level 3 - Client accepts temporary relocation but may have difficulty adjusting to his new surroundings - This rating has been assigned due to his supportive family, age, motivation, and training, which will take place in a rehabilitation center rather than regular school, which might not be as well aware of his potential adjustment problems.

VI. SOCIAL COMPETENCY

D. Family Support

_____1. Good; family shows great deal of understanding of client; very supportive and helpful
_____2. Moderate, although not ideal, support is adequate
_____3. Fair; support given but is inappropriate; evidence of underlying ambivalence on the part of the family
_____4. Poor; support given but there is definite indifference on the part of the family toward client or his rehabilitation
_____5. Very poor; family definitely non-supportive, strong opposition

Level 1 - Good; family shows a great deal of understanding of client; support very positive and appropriate - has been assigned because not only are they supportive, but they have also taken an active interest in his physical and occupational therapy programs.

Example 6. Jack is a 35-year-old double leg amputee. His medical report shows he is in otherwise good health, but he constantly complains of many aches and pains unrelated to his disability. Further medical examinations show no justification for his complaints and his complaints vary from week to week.

Jack still lives with his parents, who seem to enjoy his dependency on them. They presently seem to make all of his decisions for him. His mother always brings Jack to the counseling sessions and wants to sit in on them. When talking to Jack without his mother present, he becomes extremely quiet and only answers simple questions in a "yes-no" manner. Although Jack's mother makes certain he keeps his appointments, the counselor feels everything Jack may accomplish is mostly cancelled out by his mother's over-protectiveness.

I. DIFFICULTY ONLY

E. Availability of Transportation

_____1. Client has easy access to an automobile or inexpensive public transportation
_____2. Client must be driven by family, friends, or use taxi, which are available
_____3. Client must be driven by family, friends, or use taxi, but these resources are not readily available
_____4. Many special considerations must be made by the counselor to provide transportation
_____5. Client is homebound or must remain in a hospital or institution

Level 2 - Client must be driven by family, friends, or use taxi, which are available - Jack's mother presently sees that he keeps his appointments; however, if Jack becomes independent, his mother's helpfulness may turn into opposition. In this case, although Jack's physical condition has not changed, his mother may become far less willing to provide transportation, and he would be rated at level 3 - Client must be driven by family, friends, or use taxi, but these resources are not readily available.

IV. PHYSICAL FUNCTIONING

A. General Health Status Other than Disability

_____1. Feels good most of the time; has feelings of vitality
_____2. Generally feels good, but reports minor problems that seem reasonable
_____3. Multiple complaints, which seem mostly reasonable
_____4. Multiple complaints that seem mostly unjustified by his physical condition
_____5. Multiple complaints that seem totally unjustified by his physical condition

Level 5 - Multiple complaints that seem totally unjustified by his physical condition - has been assigned. The week-to-week variation in the complaints and lack of justification by further medical examination make this rating reasonable. In the absence of further medical examination, this client might have been rated at level 4 - Multiple complaints that seem mostly unjustified by his physical condition.

VI. SOCIAL COMPETENCY

B. Decision-Making Ability

_____1. Takes strong active role in decision making
_____2. Slow to make decisions but makes his own decisions
_____3. Wants others to make decisions but will take some part in decision - making process
_____4. Others make decisions for him and manage his personal affairs
_____5. Will neither help make decisions nor take action on help from others; counselor must work with other professional agencies, persons, or institutions before client can proceed in the rehabilitation process

Level 4 - Others make decisions for him and manage his personal affairs - is assigned due to his obvious dependency on his mother. Level 5 would not be checked unless the problem became so severe that the counselor would have to acquire short-term psychotherapy for the client, or referral to a local mental health clinic for treatment.

D. Family Support

_____1. Good; family shows great deal of understanding of client; very supportive and helpful
_____2. Moderate; although not ideal, support is adequate
_____3. Fair; support given but is inappropriate; evidence of underlying ambivalence on the part of the family
_____4. Poor; support given but there is definite indifference on the part of the family toward client or his rehabilitation
_____5. Very poor; family definitely non-supportive, strong opposition

Level 4 - Poor; support given but there is definite indifference on the part of the family toward client or his rehabilitation - is assigned because support is present, but the family wants to keep the client dependent on them. The desire to keep the client dependent makes the family an active negative influence. This active negative influence is the reason the client was assigned Level 4 rather than Level 3. Level 5 is reserved for cases where the family shows strong open opposition.

SERVICE OUTCOME MEASUREMENT PROJECT

Instruction for Research Cases

As the first step in your participation in the Service Outcome Measurement Project, you recently completed a set of training exercises. We are ready now to implement the data gathering phase of the project. Please read the following instructions carefully and follow them precisely throughout the study. NOTE: It probably would be helpful for you to reread "An Overview of the Project" which you received early in May.

Instructions for Study II participants (Maryland, Michigan, Tennessee, Texas Blind, Utah, Oklahoma Group A)

We have enclosed with these instructions ten (10) copies of Form A. Five (5) of these forms are Blue and five (5) are Green. These colors are important for our Data Control System, so please be careful to use the right color at the right time. Beginning with the next case you accept for services, and continuing through the next five (5) cases accepted, complete a BLUE Form A after the acceptance interview and place a blank GREEN Form A in the client's folder. Following completion of the BLUE Form A, you need do nothing more than provide your regular services to each of the five clients. You are to complete the GREEN Form A only upon termination of services (status 26, 28, 30) or upon notice from the project staff. The blank Green Form A should be retained in the client's folder as a reminder to you to fill it out if you should close the case prior to hearing from us. Inasmuch as we would like to have the same counselor complete both forms (Blue and Green) on a single client, please make every effort to keep these five clients on your own caseload. Should the possibility of a transfer of a case to another counselor arise, contact your liaison person immediately. If you have any questions regarding the form, consult the Form A Manual which accompanied the training cases. If your question is not answered in the Manual, or if you have any questions regarding instructions or procedures, do not hesitate to contact your liaison person.

Instructions for Study IV participants (Arkansas, Delaware, Michigan, Oregon, Texas Blind, Oklahoma Group B)

We have enclosed with these instructions five (5) copies of Form B. Beginning with the next case you close in status 26, 28, or 30, and continuing through the next five (5) such closures, complete Form B on each status 26, 28, or 30 closure. DO NOT complete the form on any 08 closures. Inasmuch as the data on page 3 of this form will be read into the computer optically, please take extra precautions to not make any extraneous marks on page 3. Complete instructions are available on the form itself. However, if any questions arise regarding the form, instructions, or procedures, do not hesitate to contact your liaison person.

Additional Instructions (All Participating Counselors)

We have enclosed pre-addressed envelopes with each form. In order to assure proper receipt of this material in our office, please use these pre-addressed envelopes when returning the forms. Also, return only one form in each envelope. Send each form to us immediately upon its completion: DO NOT SAVE THE FORMS UNTIL ALL FIVE HAVE BEEN COMPLETED.

Please note that counselors from the Michigan and Texas Blind agencies will be participating in both of the above studies: hence, they will receive materials for both studies and follow both sets of instructions above. One group of eighty (80) counselors from Oklahoma will participate in Study II, while another group of eighty (80) will participate in Study IV. Oklahoma counselors will be notified of their group assignments by special memorandum.

The continued cooperation of all participating counselors is greatly appreciated.

PLEASE READ CAREFULLY

STUDY II

FORM A_1

Relative Difficulty of Sample Cases

The following cases from your caseload are included in Study II of the Service Outcome Measurement Project; please indicate the client's current status (two digit status code) in the space to the right of the client's social security number.

Client	Social Security Number	Current Status

As the counselor actively involved in the rehabilitation of these clients, you are in the best position to judge the difficulty of these cases. The purpose of this form is to quantify your experience with these clients.

This form asks you to rate these cases according to three attributes. The first is a global case difficulty rating. This rating is meant to reflect the total difficulty of the case. The second rating is of your actual time and effort spent on the case. Third, is the rating of the severity of the client's handicap. Severity refers to the total complex of the client's problems including educational, mental and emotional, as well as physical limitations.

Although these ratings are concerned with the same general area, each should be considered separately. Read carefully the explanatory paragraphs that precede the individual ratings, and make all ratings in relation to your total caseload.

The project staff would like to thank you for your individual effort and cooperation. It is greatly appreciated.

GLOBAL CASE DIFFICULTY RATING

We would like for you to judge the total case difficulty of the five sample cases. For this rating, consider all aspects of the cases.

The sample clients are listed below. Beside each client is a scale indicating a continuum from extremely difficulty to not too difficult. In relation to your total caseload, place an X on the scale corresponding to the case listed.

Client	Extremely Difficult 1	2	3	4	5	6	7	8	9	10	Not Too Difficult 11

TIME AND EFFORT RATING

We would like for you to rate the five sample clients in terms of the total time and effort actually given to the cases. Since some of the cases may still be open, it might be necessary for you to project the amount of additional time and effort you expect to give a particular client. Time and effort is not necessarily related to severity of handicap and should be considered separately.

The sample clients are listed below. Beside each client is a scale indicating a continuum from a great deal of time and effort to very little time and effort. In relation to your total caseload, place an X on the scale corresponding to the time and effort you have spent, and/or plan to spend on the named client. Remember, time and effort should be considered independently from other aspects of the case.

Client	A Great Deal of Time and Effort	1	2	3	4	5	6	7	8	9	10	11	Very Little Time and Effort
____________		_	_	_	_	_	_	_	_	_	_	_	
____________		_	_	_	_	_	_	_	_	_	_	_	
____________		_	_	_	_	_	_	_	_	_	_	_	
____________		_	_	_	_	_	_	_	_	_	_	_	
____________		_	_	_	_	_	_	_	_	_	_	_	

SEVERITY OF HANDICAP RATING

We would like you to rate the five sample clients according to the severity of their handicap. Severity of the handicap refers to limitations imposed on the client by his disability and his reaction to the disability in terms of the client's personal frame of reference. That is, the client's total complex of physical, emotional, mental, and vocational problems with which he must cope, with or without the help of rehabilitation.

The sample clients are listed below. Beside each client is a scale indicating a continuum from extremely severe handicap to not too severe handicap. In relation to your total caseload, place an X on the scale corresponding to the severity of the named client's handicap.

Client	Extremely Severe Handicap											Not Too Severe Handicap
		1	2	3	4	5	6	7	8	9	10	11	

APPENDIX C

CHARACTERISTICS OF SAMPLE CLIENTS

The characteristics of the sample clients are presented for the individual states and for the total sample. Means and standard deviations were computed where appropriate. If it were possible for a client not to have a characteristic, such as weekly earnings, the mean and standard deviation are presented for both the total sample and for only those who have the characteristic. Categories are used where appropriate and are grouped by the codes used on the Rehabilitation Services Administration's standard reporting form (R-300).

The demographic breakdown used in the anlysis for the homogenity of the subgroup regression coefficients is given on page C.2.

DEMOGRAPHIC SUBGROUPS USED FOR F-TESTS FOR HOMOGENITY OF SUBGROUP REGRESSION COEFFICIENTS AND DUNCAN'S NEW MULTIPLE RANGE TESTS

States	N
Maryland	350
Michigan	225
Oklahoma	345
Tennessee	345
Utah	300
Texas (Blind)	255

Marital Status	N
Married	578
Widowed	79
Divorced	203
Separated	122
Never Married	838

Age	N
10-19	524
20-29	549
30-39	277
40-49	214
50-59	169
60 +	87

Race	N
White	1369
Non-White	451

Sex	N
Male	957
Female	863

Primary Disability	Code[a]	N
Blind	100's	349
Hearing	200's	54
Orthopedic	300's	312
Amputations	400's	44
Psychological	500-529	532
Mental Retardation	530's	178
Other N.E.C.	600's	351

Previous Agency Contact	N
Yes	320
No	1500

Referral Source	Code[a]	N
Educational Institutions	10-19	338
Hospitals, Sanatoriums, and Health Agencies	20-39	335
Welfare Agencies	40-44	213
Public and Private Organizations (not specifically Health, Education & Welfare)	50-69	299
Individuals	70-79	635

[a] Refers to R-300 Code

STUDY II CHARACTERISTICS OF SAMPLE CLIENTS
N = 1820

	Maryland		Michigan		Oklahoma		Tennessee		Utah		Tex. (Bld)		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Status[a] at Completion of Form A														
10-12	172	49	198	88	211	61	295	85	104	35	152	60	1132	62
14-16	92	26	2	01	60	17	16	05	16	05	3	01	189	10
18	52	15	20	09	73	21	32	09	176	59	63	25	416	23
20-22	34	10	4	02	1	0	2	01	4	01	35	14	80	04
24	-	-	1	0	-	-	-	-	-	-	2	01	3	0
Total	350	100	225	100	345	99	345	100	300	100	255	101	1820	99
Status[a] at Completion of Rating Form (Six months after completion of Form A)														
10-12	37	11	15	07	18	05	19	06	11	04	11	04	111	06
14-16	36	10	13	06	50	14	41	12	14	05	55	22	209	11
18	75	21	61	27	172	50	110	32	196	65	65	25	679	37
20-22	51	15	36	16	42	12	50	14	22	07	40	16	241	13
24	08	02	16	07	19	06	21	06	26	09	2	01	92	05
26	130	37	70	31	38	11	94	27	27	09	73	29	432	24
28	09	03	05	02	02	01	05	01	04	01	06	02	31	02
30	04	01	09	04	04	01	05	01	0	-	03	01	25	01
Total	350	100	225	100	345	100	345	99	300	100	255	100	1820	99

[a] R-300 codes

	Maryland		Michigan		Oklahoma		Tennessee		Utah		Tex. (Bld)		Total	
Race														
White	246	70	180	80	306	89	239	69	272	91	126	49	1369	75
Black	103	29	41	18	30	09	106	31	3	01	48	19	331	18
Indian	-	-	3	01	6	02	-	-	7	02	-	-	16	01
L.American	-	-	1	0	-	-	-	-	18	06	80	31	99	05
Other	1	0	-	-	3	01	-	-	-	-	1	0	5	00
Total	350	99	225	99	345	101	345	100	300	100	255	99	1820	99
Sex														
Male	174	50	141	63	169	49	164	48	166	55	143	56	957	53
Female	176	50	84	37	176	51	181	52	134	45	112	44	863	47
Total	350	100	225	100	345	100	345	100	300	100	255	100	1820	100

	Maryland		Michigan		Oklahoma		Tennessee		Utah		Tex.(Bld)		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Referral Source R-300 Codes														
10-19	63	18	39	17	99	29	62	18	48	16	27	11	338	19
20-29	84	24	18	08	34	10	56	16	8	03	26	10	226	12
30-39	16	05	19	08	8	02	29	08	28	09	9	4	109	06
40-44	22	06	35	16	50	15	52	15	42	14	12	5	213	12
50-59	47	13	41	18	11	03	44	13	70	23	45	18	258	14
60-69	10	03	15	07	2	01	4	1	8	03	2	01	41	02
70-79	108	31	58	26	141	41	98	28	96	32	134	53	635	35
Total	350	100	225	100	345	101	345	99	300	100	255	102	1820	100
Previous Agency Contact														
Yes	78	22	47	21	45	13	71	21	43	14	36	14	320	18
No	272	78	178	79	300	87	274	79	257	86	219	86	1500	82
Total	350	100	225	100	345	100	345	100	300	100	255	100	1820	100
Marital Status														
Married	87	25	83	37	109	32	107	31	81	27	111	44	578	32
Widowed	15	04	7	03	9	03	22	06	6	02	20	08	79	04
Divorced	28	08	21	09	47	14	35	10	46	15	26	10	203	11
Separated	33	09	11	05	16	05	33	10	17	06	12	05	122	07
Never Married	187	53	103	46	164	48	148	43	150	50	86	34	838	46
Total	350	99	225	100	345	102	345	100	300	100	255	101	1820	100
Primary Disability R-300 Codes														
100-199	15	04	7	03	51	15	14	04	14	05	248	97	349	19
200-299	18	05	11	05	4	01	19	06	2	01	-	-	54	03
300-399	63	18	56	25	78	23	56	16	56	19	3	01	312	17
400-499	15	04	10	04	4	01	9	03	2	01	4	02	44	02
500-529	118	34	74	33	95	28	82	24	163	54	-	-	532	29
530-539	44	13	29	13	19	06	55	16	31	10	-	-	178	10
600-699	77	22	38	17	94	27	110	32	32	11	-	-	351	19
Total	350	100	225	100	345	101	345	101	300	101	255	100	1820	99
Secondary Disability R-300 Codes								N=532						
100-199	13	12	2	4	9	09	6	07	2	02	1	01	33	06
200-299	3	03	2	4	1	01	4	05	2	02	2	02	14	03
300-399	12	11	5	10	17	16	11	13	11	13	12	11	68	13
400-499	2	02	1	2	1	01	1	01	-	-	1	01	6	01
500-529	29	27	23	46	25	24	10	12	39	48	14	13	140	26
530-539	6	6	2	4	1	01	4	05	5	06	22	21	40	08
600-699	41	39	15	30	50	48	47	57	23	28	55	51	231	43
Total	106	100	50	100	104	100	83	100	82	99	107	100	532	100

[a] Only clients with secondary disabilities

	Maryland	Michigan	Oklahoma	Tennessee	Utah	Tex. (Bld)	Total
Age	30.55	28.27	27.69	32.09	25.68	41.04	30.69
Std.Deviation	14.88	10.18	12.38	14.09	9.97	17.04	14.18
Age Started Working							
a. All Clients Total N = 1820							
Mean	15.60	15.37	14.58	15.40	14.29	16.28	15.22
Std.Deviation	10.37	8.46	9.55	10.41	8.92	10.36	9.79
b. Clients with Previois Employment N = 1429							
Mean	20.07	18.90	18.77	20.13	18.56	19.67	19.38
Std.Deviation	6.94	4.62	6.23	6.82	4.92	7.93	6.44
Number of Documented Disabilities Other Than Primary and Secondary N = 143							
Mean	1.67	1.13	1.74	1.50	1.64	1.50	1.58
Std.Deviation	1.51	0.33	0.97	0.76	1.15	0.67	1.02
Weekly Earnings							
a. All Clients N = 1820							
Mean	14.47	15.30	9.95	11.82	12.40	15.46	13.24
Std.Deviation	33.04	14.34	23.46	24.99	29.78	32.11	30.41
b. Only Clients with Earnings N = 411							
Mean	64.95	82.28	45.77	53.65	63.07	51.87	58.65
Std.Deviation	41.40	45.45	29.88	24.31	36.24	39.64	37.86
Number of Dependents							
a. All Clients Total N = 1820							
Mean	.92	1.26	.86	.93	.99	1.09	0.99
Std.Deviation	1.67	1.72	1.51	1.57	1.59	1.99	1.67
b. Only Clients with Dependents N = 687							
Mean	2.68	2.70	2.40	2.50	2.59	2.94	2.62
Std.Deviation	1.83	1.56	1.63	1.63	1.57	2.28	1.76

APPENDIX D

Tables for Comparison of Adjusted and Unadjusted Correlations and Range Tests

Appendix D contains more detailed tables of analyses mentioned in the text. These tables are listed below.

Table

Results of Tests for Homogeneity of Adjusted and Unadjusted Correlation Coefficients for Area Scores - - - - - - - - - D.1

Results of Tests for Homogeneity of Adjusted and Unadjusted Correlation Coefficients for Factor Scores - - - - - - - - - D.2

DUNCAN'S NEW MULTIPLE RANGE TESTS

Original Area Scores

Age Subgroups - - - - - - - - - D.3

Marital Status Subgroup - - - - - - - - - D.4

Primary Disability Subgroups - - - - - - - - - D.5

Scores From Factors

Age Subgroups - - - - - - - - - D.6

Marital Status Subgroups - - - - - - - - - D.7

Primary Disability Subgroups - - - - - - - - - D.8

Table D.1

RESULTS OF TESTS[a] FOR HOMOGENEITY OF ADJUSTED[b] AND UNADJUSTED CORRELATION COEFFICIENTS FOR AREA SCORES

	Adjusted r	Unadjusted r	Z Score	P
Area I Difficulty				
Difficulty	.32	.34	.65	.2578
Time and Effort	.24	.25	.31	.3783
Severity of Handicap	.34	.29	1.60	.0548
Area III Econ/Vocational				
Difficulty	.22	.24	.61	.2709
Time and Effort	.16	.19	.89	.1867
Severity of Handicap	.19	.20	.30	.3821
Area IV Physical Functioning				
Difficulty	.27	.23	1.23	.1093
Time and Effort	.20	.18	.60	.2743
Severity of Handicap	.41	.33	2.68	.0037
Area V Adjustment to Disability				
Difficulty	.31	.34	.97	.1660
Time and Effort	.19	.22	.91	.1814
Severity of Handicap	.30	.28	.63	.2643
Area VI Social Competency				
Difficulty	.30	.34	1.29	.0958
Time and Effort	.22	.25	.92	.1788
Severity of Handicap	.29	.26	.94	.1736
TOTAL SCORE				
Difficulty	.39	.40	.34	.3669
Time and Effort	.28	.30	.63	.2643
Severity of Handicap	.41	.36	1.70	.0446

[a] Reference Snedecor, G. W. and Cochran, W. G. Statistical Methods, Iowa State University Press, Ames, Iowa, 1971.

[b] Method of Adjustment given in Chapter V.

Table D.2

RESULTS OF TESTS FOR HOMOGENEITY OF ADJUSTED[b] AND UNADJUSTED CORRELATION COEFFICIENTS FOR FACTOR SCORES

	Adjusted r	Unadjusted r	Z Score	P
Factor Score I Econ/Vocational				
Difficulty	.21	.23	.63	.2643
Time and Effort	.16	.18	.60	.2743
Severity of Handicap	.19	.19	0.00	.5000
Factor Score II Physical Functioning				
Difficulty	.23	.19	1.21	.1131
Time and Effort	.16	.15	.30	.3821
Severity of Handicap	.39	.30	2.96	.0015
Factor Score III Psychosocial				
Difficulty	.32	.35	.93	.1762
Time and Effort	.21	.24	.91	.1814
Severity of Handicap	.31	.29	.64	.2611
Factor Score IV Family Relationships				
Difficulty	.25	.30	1.56	.0594
Time and Effort	.20	.22	.60	.2743
Severity of Handicap	.21	.21	0.00	.5000
Factor Score V Education				
Difficulty	.14	.17	.89	.1867
Time and Effort	.09	.14	1.47	.0708
Severity of Handicap	.16	.14	.59	.2776
FACTOR TOTAL SCORE				
Difficulty	.37	.39	.68	.2483
Time and Effort	.27	.29	.63	.2643
Severity of Handicap	.39	.34	1.67	.0475

[a] Reference Snedecor, G. W. and Cochran, W. G. Statistical Methods Iowa State University Press, Ames, Iowa, 1971.

[b] Method of Adjustment given in Chapter V.

Table D.3

RESULTS OF COMPARISON OF AGE SUBGROUP REGRESSION COEFFICIENTS[a] USING DUNCAN'S NEW MULTIPLE RANGE TEST[b]

	Age Subgroups					
Beta Rank	Area I	Area V	Total	Area I	Area V	Area I
1. Low	60 +	60 +	60 +	60 +	60 +	60 +
2.	50-59	50-59	50-59	50-59	50-59	40-49
3.	10-19	10-19	10-19	40-49	40-49	50-59
4.	30-39	40-49	40-49	10-19	30-39	10-19
5.	40-49	30-39	30-39	30-39	10-19	30-39
6. High	20-29	20-29	20-29	20-29	20-29	20-29
Dependent Variable	Case Difficulty Rating			Time & Effort Rating		Severity of Handicap Rating

---

[a] Dependent variable is the counselors' ratings; independent variable is the area score.

[b] Homogenous subsets of regression coefficients are indicated by brackets.

Table D.4

RESULTS OF COMPARISONS OF MARITAL STATUS SUBGROUP REGRESSION COEFFICIENTS[a] USING DUNCAN'S NEW MULTIPLE RANGE TEST[b]

	Marital Status Subgroups		
Beta Rank	Area III	Area IV	Total
1. Low	Separated	Separated	Separated
2.	Widowed	Widowed	Widowed
3.	Divorced	Divorced	Divorced
4.	Married	Married	Married
5. High	Never Married	Never Married	Never Married
Dependent Variable	Severity of Handicap Ratings		

[a] Dependent variable is the counselors' ratings; independent variable is the area score.

[b] Homogenous subsets of regression coefficients are indicated by brackets.

Table D.5

RESULTS OF COMPARISONS OF PRIMARY DISABILITY SUBGROUP REGRESSION COEFFICIENTS[a] USING DUNCAN'S NEW MULTIPLE RANGE TEST[b]

	Primary Disability Subgroups	
Beta Rank	Area III	Codes
1. Low	Psychological	(500-529)[c]
2.	Amputations	(400's)
3.	Hearing	(200's)
4.	Other	(600's)
5.	Visual	(100's)
6.	Orthopedic	(300's)
7. High	Mental Retardation	(530's)
Dependent Variable	Severity of Handicap Ratings	

[a] Dependent variable is the counselors' ratings; independent variable is the area score.

[b] Homogenous subsets of regression coefficients are indicated by brackets

[c] Numbers in parenthesis refer to R-300 codes.

Table D.6

RESULTS OF COMPARISONS OF AGE SUBGROUP REGRESSION COEFFICIENTS[a] USING DUNCAN'S NEW MULTIPLE RANGE TEST[b]

	Age Subgroups			
Beta Rank	Factor III	Factor V	Factor V	Factor V
1. Low	60 +	30-39	40-49	30-39
2.	50-59	50-59	30-39	50-59
3.	10-19	60 +	60 +	60 +
4.	30-39	40-49	50-59	40-49
5.	40-49	10-19	10-19	20-29
6. High	20-29	20-29	20-29	10-19
Dependent Variable	Case Difficulty Ratings		Time & Effort Ratings	Severity of Handicap Ratings

[a] Dependent variable is counselors' ratings; independent variable is the factor score.

[b] Homogenous subsets of regression coefficients are indicated by brackets.

Table D.7

RESULTS OF COMPARISONS OF MARITAL STATUS SUBGROUP REGRESSION COEFFICIENTS[a] USING DUNCAN'S NEW MULTIPLE RANGE TEST[b]

	Marital Status Subgroups			
Beta Rank	Factor V	Factor I	Factor V	Factor Total
1. Low	Separated	Separated	Separated	Separated
2.	Married	Widowed	Widowed	Widowed
3.	Widowed	Divorced	Married	Divorced
4.	Divorced	Married	Divorced	Married
5. High	Never Married	Never Married	Never Married	Never Married
Dependent Variable	Case Difficulty Rating	Severity of Handicap Rating		

[a] Dependent variable is counselors' ratings; independent variable is the factor score.

[b] Homogenous subsets of regression coefficients are indicated in brackets.

Table D.8

RESULTS OF COMPARISONS OF PRIMARY DISABILITY SUBGROUP REGRESSION COEFFICIENTS[a] USING DUNCAN'S NEW MULTIPLE RANGE TEST[b]

	Primary Disability Subgroups		
Beta Rank	Factor I	Factor I	Factor V
1. Low	Psy. (500-529)	Psy. (500-529	Other (600's)
2.	Hearing (200's)	Amp. (400's)	Psy. (500-529)
3.	Other (600's)	Hearing (200's)	Visual (100's)
4.	Visual (100's)	Other (600's)	Ortho. (300's)
5.	M.R. (530's)	Visual (100's)	Amp. (400's)
6.	Ortho (300's)	Ortho.(300's)	Hearing (200's)
7. High	Amp. (400's)	M.R. (530's)	M.R. (530's)
Dependent Variable	Time & Effort Rating	Severity of Handicap Rating	

[a] Dependent variable is counselors' ratings; independent variable is the factor score.

[b] Homogenous subsets of regression coefficients are indicated by brackets.

[c] Numbers in parenthesis refer R-300 codes.

APPENDIX E

COUNSELOR AND CASELOAD CHARACTERISTICS

This appendix organizes the data returned from the 364 counselors completing the study on Form C - Counselor/Caseload Characteristics Form.

STUDY II COUNSELOR CHARACTERISTICS

N = 364

	Maryland		Michigan		Oklahoma		Tennessee		Utah		Tex. (Bld)		Total	
Age	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
24-Below	4	06	3	07	-	-	1	01	-	-	3	06	11	03
25 - 34	44	63	34	76	18	26	32	46	33	55	29	57	190	52
35 - 44	15	21	6	13	29	42	20	29	20	33	10	20	100	27
45 - 54	4	06	2	04	17	25	12	17	6	10	8	16	49	13
55 - 64	3	04	-	-	5	07	4	06	1	02	1	02	14	04
Total	70	100	45	100	69	100	69	99	60	100	51	101	364	99
Sex														
Male	43	61	34	76	58	84	54	78	54	90	45	88	288	79
Female	27	39	11	24	11	16	15	22	6	10	6	12	76	21
Total	70	100	45	100	69	100	69	100	60	100	51	100	364	100
Race														
White	66	94	44	98	68	99	65	94	58	97	41	80	342	94
Black	4	06	1	02	-	-	4	06	-	-	-	-	9	02
Indian	-	-	-	-	1	01	-	-	-	-	-	-	1	00
L.American	-	-	-	-	-	-	-	-	-	-	10	20	10	03
Other	-	-	-	-	-	-	-	-	2	03	-	-	2	01
Total	70	100	45	100	69	100	69	100	60	100	51	100	364	100
Marital Status														
Married	41	59	36	80	61	88	55	80	46	77	45	88	284	78
Widowed	2	03	-	-	-	-	-	-	-	-	-	-	2	01
Divorced	3	04	2	04	3	04	1	01	5	08	1	02	15	04
Separated	4	06	-	-	1	01	1	01	-	-	1	02	7	2
Never Married	20	29	7	16	4	06	12	17	9	15	4	08	56	15
Total	70	101	45	100	69	99	69	99	60	100	51	100	364	100
Education - Highest Degree														
High School	-	-	-	-	-	-	1	01	-	-	-	-	1	0
A A	2	03	-	-	-	-	-	-	-	-	-	-	2	01
Bachelors	52	74	19	42	9	13	23	33	41	68	14	27	158	43
Masters	13	19	26	58	59	86	45	65	18	30	37	73	198	54
Doctors	-	-	-	-	1	01	-	-	-	-	-	-	1	00
Other	3	04	-	-	-	-	-	-	1	01	-	-	4	01
Total	70	100	45	100	69	100	69	99	60	99	51	100	364	99

	Maryland		Michigan		Oklahoma		Tennessee		Utah		Tex. (Bld)		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Undergraduate Major														
Theology	1	01	2	04	1	01	2	03	1	02	5	10	12	03
Education	13	19	5	11	40	58	27	39	3	05	5	10	93	26
Psychology	15	21	24	53	7	10	4	06	12	20	10	20	72	20
Sociology	7	10	8	18	4	06	10	14	29	48	9	18	67	18
Business	4	06	-	-	6	09	9	13	4	07	5	10	28	08
Philosophy	5	07	-	-	-	-	-	-	-	-	-	-	5	01
Social Work	1	01	2	04	4	06	-	-	2	03	-	-	9	02
Other	23	33	3	07	7	10	16	23	9	15	17	33	75	21
N/A	1	01	1	02	-	-	1	01	-	-	-	0	3	01
Total	70	99	45	99	69	100	69	99	60	100	51	101	364	100
Graduate Major														
Theology	3	04	-	-	-	-	2	03	-	-	1	02	6	02
Education	13	19	7	16	2	03	21	30	4	07	7	14	54	15
Psychology	6	09	6	13	47	68	6	09	16	27	9	18	90	25
Sociology	1	01	-	-	10	14	3	04	5	08	4	08	23	06
Business	1	01	-	-	1	01	1	01	-	-	1	02	4	01
Philosophy	-	-	-	-	1	01	-	-	-	-	-	0	1	00
Social Work	-	-	-	-	2	03	1	01	3	05	-	-	6	02
Other	16	23	17	38	5	07	16	23	8	13	19	37	81	22
N/A	30	43	15	33	1	01	19	28	24	40	10	20	99	27
Total	70	100	45	100	69	98	69	99	60	100	51	101	364	100
Sponsored by Rehabilitation Counselor Training Program														
Yes	30	43	17	38	10	14	22	32	12	20	14	27	105	29
No	40	57	28	62	59	86	47	68	48	80	37	73	259	71
Total	70	100	45	100	69	100	69	100	60	100	51	100	364	100
Previous Client of Rehabilitation														
Yes	4	06	3	07	13	19	12	17	8	13	10	20	50	14
No	66	94	42	93	56	81	57	83	52	87	41	80	314	86
Total	70	100	45	100	69	100	69	100	60	100	51	100	364	100

CASELOAD CHARACTERISTICS

	Maryland		Michigan		Oklahoma		Tennessee		Utah		Tex. (Bld)		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Type of Caseload														
General	32	46	25	56	39	57	32	46	28	47	-	-	156	43
Specialized	38	54	20	44	30	43	37	54	32	53	51	100	208	57
Total	70	100	45	100	69	100	69	100	60	100	51	100	364	100
Specialized by Disability or Facility														
Disability	17	24	10	22	23	33	28	41	19	32	51	100	148	41
Facility	21	30	10	22	7	10	9	13	13	22	-	-	60	16
N/A	32	46	25	56	39	57	32	46	28	47	-	-	156	43
Total	70	100	45	100	69	100	69	100	60	101	51	100	364	100
Caseload Specialized by Disability-Type of Disability														
100-199	1	01	-	-	10	14	-	-	2	03	51	100	64	18
200-299	-	-	1	02	-	-	4	06	-	-	-	-	5	01
300-399	-	-	-	-	-	-	-	-	-	-	-	-	-	-
400-499	-	-	-	-	-	-	-	-	-	-	-	-	-	-
500-529	13	19	7	14	8	12	13	19	9	15	-	-	50	14
530-599	2	03	2	04	5	07	10	14	8	13	-	-	27	07
600-699	1	01	-	-	-	-	1	01	-	-	-	-	2	01
N/A	53	76	35	78	46	67	41	59	41	68	-	-	216	59
Total	70	100	45	98	69	100	69	99	60	99	51	100	364	100
Caseload Specialized by Facility-Type of Facility														
Workshop	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rehab. Center	1	01	-	-	-	-	2	03	-	-	-	-	3	01
Corrections	-	-	-	-	-	-	-	-	3	05	-	-	3	01
Special Project	1	01	6	13	4	06	5	07	4	07	-	-	20	05
Other	19	27	4	09	3	04	2	03	6	10	-	-	34	09
N/A	49	70	35	78	62	90	60	87	47	78	51	100	304	84
Total	70	99	45	100	69	100	69	100	60	100	51	100	364	100
Location of Caseloads-Urban or Rural														
Urban	24	34	20	44	20	29	28	41	23	38	18	35	133	37
More Urban than Rural	23	33	14	31	21	30	16	23	17	28	16	31	107	29
More Rural than Urban	12	17	10	22	23	33	12	17	11	18	12	24	80	22
Rural	11	16	1	02	5	07	13	19	8	13	5	10	43	12
Blanks	-	-	-	-	-	-	-	-	1	02	-	-	1	00
Total	70	100	45	99	69	99	69	100	60	99	51	100	364	100

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Development and Testing of the Service Outcome Measurement Form

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May, 1975

Preface

This publication is an attempt to summarize the development and testing of the Service Outcome Measurement Form (SOM). Summarized is the development of the form, the reliability study, factor analytic study, case difficulty study, and client change study. More complete information is available in the three monographs mentioned in the references. These monographs and an instruction manual for the factored version of the SOM Form are available from the Department of Institutions, Social and Rehabilitative Services, P. O. Box 25352, Oklahoma City, Oklahoma, 73125.

DEVELOPMENT AND TESTING OF THE SERVICE OUTCOME MEASUREMENT FORM

The Service Outcome Measurement Form (SOM) was designed to be an administratively feasible method of indicating case difficulty and client change for clients in State-Federal Vocational Rehabilitation Programs. The areas of client function measured are: 1) economic/vocational, 2) physical functioning, 3) psychosocial, 4) family relationships, and 5) education.

The criteria for administrative feasibility were established by the States Advisory Committee to Service Outcome Measurement Project and reported by Westerheide and Lenhart (1974a). These criteria include a) techniques developed should not require more than ten minutes of the counselors time per case to complete, b) be applicable to all state agencies, c) not require sophisticated data processing support, d) require very little in-service training, e) apply equally to counselors carrying different types of caseloads, and f) require no changes in the service delivery system. Another criteria that greatly effected the approach utilized was the requirement that the procedure utilized be capable of indicating case difficulty and client change for all clients entering the system regardless of whether client was closed rehabilitated or not rehabilitated. Since all clients are not available when the case is closed, the procedure developed must utilize some form of counselor judgement. The many administrative requirements led to the decision to develop a system of rating scales to be completed by the rehabilitation counselor.

Development of the SOM Form

An extensive review of the literature (Westerheide and Lenhart, 1974a) yielded over one hundred variables that might be related to case difficulty, client change, and rehabilitation success. These variables ranged from age, race, and sex to ego strength, environmental stress, and social class identity. Measurement of the variables ranged from counting procedures to vague judgements of ill defined psychological traits.

In order to organize the various concepts and variables into a consistent frame of reference for the development of the scales, an employability orientation was used. For example, instead of using terms such as self concept, self esteem, and self image, a scale was developed for rating the client's "confidence as a worker." This approach provided a means of avoiding medical and psychiatric terminology and of focusing attention to the behavior attitudes necessary to acquire and maintain gainful employment.

The employability framework makes it possible to standardize the counselors perceptions and knowledge of the client by the use of behaviorally anchored rating scales. The emphasis in the scales was placed on the client's functional ability in relation to employment. For example, rather than ask the counselor to rate the client's adherence to the values of the larger social order, the following scale was developed:

A. Identification with Worker Role

_____1. Client feels personal need to be independent, and do his share
_____2. Identity to worker role developing or deteriorated somewhat since disability but wants to work
_____3. Weak identity to worker role, little idea of day-to-day work demands
_____4. Client has adjusted to being dependent; talks of working but is unconvincing
_____5. Client strongly identifies with handicap and clings to dependent role

The SOM Form, as originally written, contained twenty three rating scales and seeks to establish the client's level of functioning on entry into the program, and the severity of the handicap in terms of the goals of vocational rehabilitation. At case closure the clent status on the same variables must again be measured. The final measurement not only gives information as to the client's status at closure, but also, when compared to the previous measure, provides an index of client change.

The twenty three scales on the original form were divided into six areas as follows:

I. Difficulty[1] - including scales:

  A. Anticipated Change in Client's Level of Functioning During Services
  B. Employment Prognosis
  C. Work History
  D. Availability of Facilities
  E. Availability of Transportation

II. Educational Status - Rating scales are not used in this area. The counselor is asked simply to record the number of years of academic education and the number of months in a) trade or vocational school, b) months of on-the-job training, and c) months of adjustment training.

III. Economic/Vocational Status - including scales:

  A. Vocational Level
  B. Weekly Earnings
  C. Work Status
  D. Primary Source of Support
  E. Dependency of Clients on others for financial support

IV. Physical Functioning - including scales:

  A. General Health Status other than Disability
  B. Mobility
  C. Physical Independence Tasks other than Mobility
  D. Work Tolerance
  E. Prominence of Vocationally Handicapping Condition
  F. Compensatory Skills

V. Adjustment to Disability - including scales:

  A. Identification with Worker Role
  B. Employment Expectations
  C. Client's Confidence as a Worker

---

[1] Unlike the other five areas on the form, Area [illegible] does not establish a present level of functioning for the measurement of change. Area I was intended to strengthen the form as a measure of case difficulty.

VI. Social Competency - including scales:

- A. Language Facility
- B. Decision Making Ability
- C. Role in Family
- D. Family Support

Area Scores consist of the sum of the ratings for the scales in that area divided by the number of scales in the area. A total score was computed by summing area scores.

An instruction manual was written which provided a detailed explanation of the meaning for each scale and included a set of practice exercises.

Reliability

Rating scales have the advantage of being conceptually straight forward and easily scored and administered. The central problem with the use of rating scales is the usual lack of inter-rater reliability. It was hoped when designing the SOM Form that the use of the employment orientation and the use of anchoring definitions at each level within the scale would overcome the usual reliability problems encountered with rating scales.

Reliability of the SOM Form was tested by having fifteen counselors rate ten test cases. Cooperating in the reliability study were the New Mexico, Texas, and Colorado rehabilitation agencies. Each agency provided five counselors to rate the test cases. The test cases for the reliability study were gathered from five Oklahoma counselors, including one counselor from the blind. All test cases were in status 10 (accepted) or recently placed in status 12 (planning). Before the counselors rated the test cases, the instruction manual was read to them and they were asked to do the practice exercises in the manual. The counselors then rated the ten test cases independently and at their own speed.

Product moment correlations were computed for all possible pairs of the fifteen counselors involved in the reliability study. A pooled estimate of the correlations was obtained by transforming the coefficients using Fishers Z (Guilford, 1956), then adding the Z scores and converting back to a pooled estimate of the correlation.

In addition to correlation coefficients, the ratings of each individual counselor of all the ten test cases were averaged and a mean, standard deviation, and range was computed on these averages. The mean of these averages provides an indicator of where the clients fell on the five point scales. The standard deviation of these averages and the range are given to reflect any consistent error or "halo effects" and the magnitude of the error.

The results of the analysis of the reliability data is given in Table 1.

Table 1

Pooled Correlations and Distribution Characteristics Of Fifteen Counselor's Ratings Of Ten Test Case Narratives[a]

			Distribution of Characteristics		
Items	Areas	r	$\bar{X}$	SD	Range
	Difficulty Only				
I A.	Anticipated Change	.35	2.92	.49	1.50
I B.	Employment Prognosis	.56	3.03	.28	.80
I C.	Employment History	.72	3.39	.42	1.30
I D.	Availability of Facilities	.45	1.51	.34	1.00
I E.	Availability of Transportation	.70	1.29	.18	.60
	Area Score[b]	.69	2.43	.19	.70
	Economic/Vocational Status				
III A.	Vocational Level	.42	3.33	.48	1.60
III B.	Weekly Earnings	.98	4.20	.07	.40
III C.	Work Status	.92	3.39	.26	.80
III D.	Primary Source of Support	.92	2.95	.15	.40
III E.	Dependency on Others for Financial Support	.92	3.89	.21	.90
	Area Score	.95	3.47	.14	.54
	Physical Functioning				
IV A.	General Health Status Other than Disability	.47	1.57	.27	1.00
IV B.	Mobility	.57	1.28	.15	.60
IV C.	Physical Independence	.70	1.17	.18	.50
IV D.	Work Tolerance	.55	1.96	.35	1.40
IV E.	Prominence of Vocationally Handicap. Condition	.78	2.37	.18	.70
IV R.	Compensatory Skills	.31	2.69	.39	1.60
	Area Score	.75	1.84	.13	.35
	Adjustment to Disability				
V A.	Identification w/Worker Role	.73	1.86	.27	.90
V B.	Employment Expectations	.59	1.97	.30	1.20
V C.	Client's Confidence in Himself as a Worker	.65	2.08	.27	1.10
	Area Score	.79	1.97	.23	.83
	Social Competency				
VI A.	Language Facility	.79	1.92	.21	.60
VI B.	Decision-Making Ability	.72	2.02	.22	.90
VI C.	Role in Family	.78	2.12	.22	.70
VI D.	Family Support	.84	2.39	.25	.90
	Area Score	.89	2.11	.15	.55
	Total Score[c]	.93	11.82	.50	1.91

---

[a] Correlations were computed for all pairs of counselors, then transformed using Fisher's z, averaged and converted back to correlations. Each counselor's ratings of the test cases were averaged and a $\bar{X}$, SD, and Range were computed for the averages.

[b] Area scores are the average score of items within the area.

[c] Sum of area scores.

The reliability coefficients for the area scores range from a low of .69 to a high of .95. The total score obtained by summing the area scores had a reliability coefficient of .93. The range of the averages of the counselors ratings for total score was 1.91 though the possible range for the total score was from five to twenty five.

It was hoped that by anchoring the five points of the scale as much as possible in behavioral terms, any "constant error" or "halo effects" would be kept under one scale step. This goal was reached in fourteen of the twenty three individual scales, and all of the area scores as indicated by the range on the means of the counselors' ratings of the ten test cases.

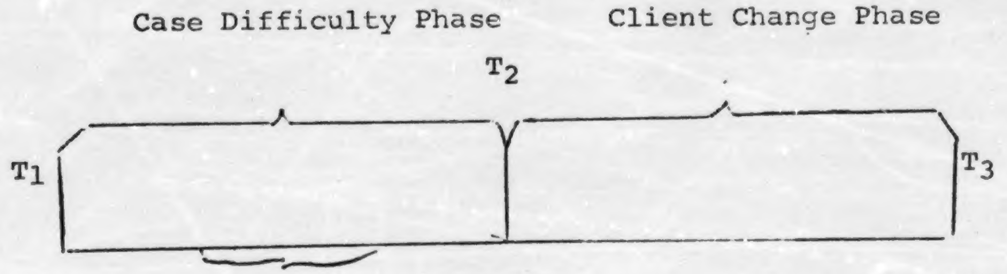
This study indicated very good reliability for the SOM Form, with only the reading of the instruction manual as training. The next step then was to test the form in the everyday rehabilitation setting.

Design of the Field Test

After the SOM Forms reliability had been established, the form was field tested in six state vocational rehabilitation agencies. Participating in the field test were the state agencies of Maryland, Michigan, Oklahoma, Tennessee, Utah, and Texas (Blind). Each of the counselors involved in the study completed the pretest SOM Form on the next five clients they accepted for services (status 10 and above) after the acceptance interview. The field test is divided into two major phases. The first is the difficulty phase which includes the pretest, factor analysis of pretest data, and ratings by the counselors six months after the pretest of the a) difficulty of their sample cases, b) time and effort spent on each case, and c) the severity of the client's handicap.

The second phase of the field test included a posttest of the sample clients at case closure or one year after the pretest if the case was still active. When all the posttest data for an individual counselor caseload was collected, the counselor was sent a form asking him to rate the individual sample cases on a) physical change of the client, b) change in social skills, and c) change in personal adjustment. In addition, the counselor was asked to rank order his five clients in terms of the benefits he felt the clients received from Vocational Rehabilitation.

Below is diagramed the time frames of the field test with the sample size completing each phase.



Pretest
N=1945

Factor Analysis
N=1945

Ratings of
Difficulty
Time & Effort
Severity of Handicap
N=1820

Posttest
N=1395
Ratings of:
Physical Change
Personal Adj. Change
Benefits Ranks
(Completed after
Posttest)

T_1 - Time 1, 0 months
T_2 - Time 2, 6 months
T_3 - 1 year after pretest

Analysis

The next section presents the factor analytic study and includes the analytic considerations for the factor analysis. This section explains the statistical procedures used in difficulty analyses and client change analysis.

Both the difficulty analyses and the change analyses involve correlating a score with a criterion rating and then investigating the stability of the relationship between the scores and criterion. For the difficulty phase of the field test the scores are the pretest SOM Scores and the criterion are counselor ratings of his five clients on a) case difficulty, b) time and effort, and c) severity of the clients handicap. For the client change phase of the field test, the scores are change scores derived by subtracting the posttest scores from the pretest scores and the criterion are counselor ratings of his five clients on a) physical change, b) change in social skills, c) change in personal adjustment, and d) a rank ordering of his five clients in terms of benefits received from vocational rehabilitation.

The model for the correlational study must permit the adjustment of the correlation coefficient for counselor differences due to divergent frames of reference. This adjustment may be made by means of analysis of covariance where the dependent variable is the scale score, the covariate is the criterion rating, and the "treatment" is the counselor making the rating. From this analysis, the following formula is computed:

$$r_a = \sqrt{\frac{\text{SS Cov}}{\text{SS Cov} + \text{SS Error}}}$$

Where: r_a = Adjusted Correlation
SS Cov = Sum of Squares of the Covariate
SS Error = Sum of Squares of the Error

The stability analyses seek to determine whether the relationship between the scores and criterion are homogeneous across different demographic subgroups. The stability is examined by using an analysis of covariance where the dependent variable is the counselors rating and the independent variable or covariate is the scale score. If the regression coefficients are homogeneous then the relationship is the same. If the regression coefficients for the subgroups of a particular demographic variable were found to be heterogeneous ($p \geq .01$), the subgroup regression coefficients were grouped using Duncan's New Multiple Range Test. The rationale for the use of Duncan's Test was the independence and normality of the regression coefficients.

Factor Analysis of the Service Outcome Measurement Form

Although the SOM Form has substantial "face validity," a factor analysis was undertaken to (1) arrange these client attributes into the most meaningful subgroups for the measurement of change, and (2) to explore the possibility of deleting scales that may be of a redundant nature with resulting improved administrative efficiency. In reference to the second purpose, item-total correlations were not usee because with the small number of items contained in this form, each item contributing heavily to the total score.

The factor analysis was performed on the pretest data of the field test. This data included 1945 SOM Forms completed by 389 vocational rehabilitation counselors in six states.

Both oblique and orthogonal rotations were considered and originally performed on the data. The results of both rotations were very similar. The orthogonal rotation was reported, however, since it is more easily interpreted, is simpler mathematically, and allows the items to cluster more clearly into factors. Input into the program was all rating scales from SOM Form and Item II A, Years of Academic Schooling.

The factor analyses yielded five general factors. Analyses requesting more than five factors added no additional information concerning the basic factor structure and the analysis requesting four factors did not allow the educational factor to separate from the psychosocial factor. The results of the factor analysis are given in Table 2 for the high loading items in the factors.

Table 2

Factor Loadings for High Loading Items on Rehabilitation Service Outcome Measure When Four, Five, Six and Twelve Factors are Rotated[a]

Item	Factor Loadings Number of Factors Rotated			
	Four	Five	Six	Twelve
Factor I Psychosocial				
V C. Confidence as Worker	.73	.77	.62	.74
VI B. Decision-Making Ability	.77	.67	.45	.72
V A. Identification with Worker Role	.67	.72	.58	.71
V B. Employment Expectations	.59	.63	.47	.62
I C. Work History	.55	.54	.37	.53
Factor II Economic/Vocational				
III E. Financial Dependency	.94	.94	.96	.94
III B. Weekly Earnings	.86	.87	.88	.87
III C. Work Status	.78	.78	.79	.79
III D. Primary Source of Support	.71	.72	.72	.72
I B. Employment Prognosis	.54	.53	.54	.53
Factor III Family Relationships				
VI D. Family Support	.90	.89	.71	.90
VI C. Role in Family	.85	.86	.72	.85
I D. Availability of Facilities	.55	.54	.15	.54
Factor IV Physical Functioning				
IV B. Mobility	.75	.75	.76	.74
IV C. Physical Independence	.71	.70	.69	.75
IV D. Work Tolerance	.50	.51	.47	.46
IV E. Prominence of Handicap	.41	.40	.38	.27
Factor V Education				
VI A. Language Facility	(.68)[b]	.76	.81	.68
II A. Years of Academic Education	(-.38)	.76	.76	.78
III A. Vocational Level	(.41)	.37	.41	.22

---

[a] Factors are listed in the order rotated in the five factor analysis.

[b] In the four factor analysis the items in Factor V loaded in Factor I Psychosocial with the loading given in the parenthesis.

From the factor analysis the best arrangement of items for the subsequent measurement of client change, appear to be:

(1) Economic/Vocational Area including items:

III B. Weekly Earnings
III C. Work Status
III D. Primary Source of Support
III E. Client's Financial Dependency

(2) Physical Functioning including items:

IV B. Mobility
IV C. Physical Independence
V D. Work Tolerance
IV E. Prominence of Handicapping Condition

(3) Psychosocial area including items:

V A. Identification with Worker Role
V B. Employment Expectations
V C. Client's Confidence as a Worker
VI B. Decision-Making Ability

(4) Family Relationships including items:

VI C. Role in Family
III D. Family Support

(5) Education including items:

II A. Years of Academic Schooling
VI A. Language Facility
III A. Vocational Level

The items that carried substantial loadings from Area I, (Difficulty Only) were left out of the above factored areas as they do not lend themselves to the measurement of client change. These items were I C. Work History, I B. Employment Prognosis, and I D. Availability of Facilities. The final factored form utilized 16 scales as compared to the original SOM Form's

23 scales. The five areas derived from the factor analysis are included with the SOM Form's original areas in the subsequent data analysis. This will allow for the comparison of the original form with the shortened factored form.

Results of the Difficulty Phase of the Field Test:

389 counselors in six states (Maryland, Michigan, Oklahoma, Tennessee, Utah, and Texas (Blind) completed pretest SOM Forms on their next five clients accepted for services after July 1, 1972. Of the 389 counselors completing the pretest, 364 counselors completed ratings on their clients on case difficulty, time and effort, and severity of handicap six months after the pretest.

Substantial correlations were found for the area, factor and total scores with the three criterion, and little was lost by using the shorter factor version (see Table 3). In addition, very little was gained by using multiple correlation. In view of the strength of the total score correlations, the SOM Form would seem very practical for agencies without sophisticated data processing equipment.

In addition to the overall correlations, the stability of the various SOM Scores in their relationship to the criterion ratings was also analyzed. The stability analysis was done by dividing the data into demographic subgroups and using an F-Test for the equality of subgroups regression coefficients

Table 3

Adjusted Correlations of Area, Factor, and Total Scores With Counselor Ratings of Case Difficulty, Time and Effort, and Severity of Handicap[a]

Pretest Area Scores	Difficulty	TE	Severity
I Difficulty	.32	.24	.34
III Economic/Vocational	.22	.16	.19
IV Physical Functioning	.27	.20	.41
V Adjustment to Disability	.31	.19	.30
VI Social Competency	.30	.22	.29
Total Score (Σ of Area Scores)	.39	.28	.41
Pretest Factor Scores[b]			
I Economic/Vocational	.21	.16	.19
II Physical Functioning	.23	.16	.39
III Psychosocial	.32	.21	.31
IV Family Relationships	.25	.20	.21
V Education	.14	.09	.16
Total Score (Σ of Factor Scores)	.37	.27	.39
Multiple Correlations			
Pretest Area Scores	.39	.29	.46
Pretest Factor Scores	.38	.27	.45

---

[a] All correlations significant beyond the .01 level (r≥.081)

[b] Factor scores are the sum of the items in the factor divided by the number of items in the factor (See page 15)

derived from an analysis of covariance. The demographic groups selected for analysis were: 1) states, 2) primary disability, 3) race, 4) sex, 5) age, 6) referral source, 7) marital status, and 8) previous agency contact. Separate analyses were completed for the eight demographic subgroups and each criterion. If there was a significant difference among the subgroup regression coefficients for a SOM Score, then Duncan's New Multiple Range Test was performed to combine the subgroups into homogeneous subsets. Twice there was a significant difference in the subgroup regression coefficients when the total score for the original form was the independent variable. The first occurred in age subgroups with the case Difficulty Rating as the dependent variable. One large homogeneous subset of age subgroups represented ages 10-49. The second significant difference for the total score occurred in marital status subgroups when the dependent variable was severity of the handicap. In this case, separated and widowed clients formed a subset separate from married, never married, and divorced clients.

Scores for the factored version of the SOM Form were also investigated for stability using the same demographic groups as with the original form scores. The only time the factor total score was significant at the .01 level was when the dependent variable was severity of the client's handicap and the data was divided into marital status subgroups. Again, as with the original area scores, the widowed and separated clients formed a homogeneous subset while never married, married, and divorced clients formed another homogeneous subset.

By the end of this phase of the field test, the SOM Form demonstrated (1) good reliability, (2) solid internal structure, and (3) a substantial and stable relationship to counselor ratings of Case Difficulty, Time and Effort, and the Severity of Client's Handicap, while at the same time, staying within the confines of administrative necessity

Results of the Client Change Phase of the Field Study

Of the 364 counselors completing the difficulty phase of the field study, 279 completed a posttest and change rating on all of their five sample clients. This gave a total sample of 1395 clients with a) pretest data, b) a posttest at case closure or one year after pretest for cases still active, and c) counselor ratings of their clients on physical change, social skills change, personal adjustment change, and rankings of benefits received from vocational rehabilitation.

Raw change scores or "difference scores" were computed by subtracting the posttest scores from the pretest scores. Due to the administrative requirement of simplicity in scoring, raw change scores were used in all analyses. It was felt any transformations of raw change scores would require more data processing support than is available in most state rehabilitative agencies.

The method of analysis for the change scores was essentially the same as for the difficulty phase of the field test. Prior to the correlational and stability analyses, t-Tests were run to insure the change scores and criterion ratings were significantly different from zero. All area, factor, and total change scores as well as the criterion ratings were significantly different from zero well beyond the .01 level. All but three of the individual scale change scores were significantly different from zero at the .01 level and the scales not significant at the .01 level were signifcantly different from zero at the .05 level.

The results of the correlational study are given in Table 4. The weakest correlations are with the Physical Change Criterion where the Area Total Change Score for the original from correlated .16 and Factor Total Change Score correlated .15. These correlations were lower than the Physical Functioning area and the Physical Functioning change scores alone, which were .22 and .20 respectively. The highest correlations of the original Area Total Change Score with the other criterion was .36 with Social Skills Change, .36 with Personal Adjustment Change. The Factor Total Change Score also showed a strong relationship with these criterion. The highest correlation for the Factor Total Change Score was also with Social Skills Change (.35) and Personal Adjustment Change (.35).

Table 4

Adjusted Correlations of Area, Factor, and Total Raw Change Scores with Counselor's Ratings of Physical Change, Changes in Social Skills for the Work Situation, Changes in Personal Adjustment and Rankings of Benefits Received from Vocational Rehabilitation[a]

Area Change Score	Physical Change	Social Skills	Personal Adj.	Benefits Ranks
Area III Economic/Vocational	.10	.24	.22	.21
Area IV Physical Functioning	.23	.23	.26	.24
Area V Adjustment to Disability	.13	.31	.32	.29
Area VI Social Competency	.05[b]	.27	.28	.23
Total Change Score	.16	.36	.36	.33
Factor Change Score				
Factor 1 Economic/Vocational	.11	.23	.21	.20
Factor 2 Physical Functioning	.20	.18	.21	.17
Factor 3 Psycho/Social	.11	.32	.33	.29
Factor 4 Family Relationships	.07	.23	.24	.22
Factor 5 Education	-.03[b]	.14	.14	.12
Total Change Score	.15	.35	.35	.31
Multiple Correlations for Change Scores				
Area Change Scores	.23	.37	.37	.34
Factor Change Scores	.22	.37	.37	.33

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[a] N=1395 sample size at end of field test

[b] Not significant at the .01 level ($r \geq .081$)

The analyses of the stability of the relationship between change scores for different demographic groups used the same technique and demographic subgroups as discussed for the difficulty phase of the field study.

Only once did the Area Total Change Score for the original Form show a significant difference among the demographic subgroup regression coefficients. This difference occurred when the data was divided into marital status subgroups and the dependent variable was Social Skills Change. Duncan's New Multiple Range Test indicated two overlapping homogeneous subsets. The first contained all marital status subgroups with the exception of married clients who had the lowest subgroup regression coefficient and the second subset which contained all marital status subgroups with the exception of never married clients who had the highest subgroup regression coefficients.

Exactly the same situation occurred for the Factor Total Change Score. That is, in only one instance did the Factor Total Change Score show a significant difference among the demographic subgroup regression coefficients. The dependent variable in this analysis was also Social Skills Change, and the overlapping subsets were the same as for the Area Total Change Score.

Discussion

To date the SOM Form has been tested for reliability, internal consistency, and against seven different criterion measures of case difficulty and client change. The form has held up well throughout the extensive testing, and is presently the most comprehensive outcome measure that meets the administrative criteria state by the States Advisory Committee. This is not to say the SOM Form is the final answer to outcome measurement in vocational rehabilitation, but it is a solid start. The weakness in the form indicated in some of the analyses should be considered when the form is being used, and modifications should be considered. Due to the extremely small differences in the analysis for the two versions of the SOM Form, it is felt that the shorter factored version of the form is the most appropriate for current utilization.

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